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Title of Invention: Pre - Filtering to increase signal to noise ratio (SNR)
Inventors (please provide full names): Geoffrey 2000 Rhoads · Adnam Alattar.
- Kavi Sharma; & Ammon E. Gustatson
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Ruanaidh, J.J.K.O.; Dowling, W.J.; Boland, F.M.;

Image Processing, 1996. Proceedings., International Conference on, Volume 3, 16-19 Sept. 1996

Pages:239 - 242 vol.3

[Abstract] [PDF Full-Text (848 KB)] **IEEE CNF** 

## 4 A watermark for digital images

Wolfgang, R.B.; Delp, E.J.;

Image Processing, 1996. Proceedings., International Conference on , Volume 3, 16-19 Sept. 1996

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## 5 Proceedings of 3rd IEEE International Conference on Image Proces:

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Boney, L.; Tewfik, A.H.; Hamdy, K.N.; Multimedia Computing and Systems, 1996., Proceedings of the Third IEEE International Conference on , 17-23 June 1996 Pages: 473 - 480

[Abstract] [PDF Full-Text (744 KB)] IEEE CNF

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Boland, F.M.; O'Ruanaidh, J.J.K.; Dautzenberg, C.; Image Processing and its Applications, 1995., Fifth International Conference (6 Jul 1995)

Pages:326 - 330

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## Watermarking Digital Images for Copyright Protection

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## Abstract

A watermark is an invisible mark placed on an image that can only be detected when the image is compared with the original. This mark is designed to identify both the source of a document as well as its intended recipient. This paper discusses various techniques for embedding such marks in grey scale and colour digital images.

## 1 INTRODUCTION

Computers, printers and high rate transmission facilities are becoming less expensive and more generally available. It is now feasible and very economical to transmit images and video sequences using computer networks rather than sending hard copies by post. In addition, images may be stored in databases in digital form. A major impediment to the use of electronic distribution and storage is the ease of intercepting, copying and redistributing electronic images and documents in their exact original form. As a result, publishers are extremely reluctant to use this means of disseminating material.

The commercial possibilities for the World Wide Web are steadily becoming more appreciated. However it is clear that in order for these possibilities to be realized that an integrated approach for the secure handling, issue and duplication of issued documents is required.

Brassil et al. [1] have investigated different methods for marking text within documents with a unique binary code word which serves to identify legitimate users of the document. The code word is embedded in the document by making subtle modifications to the structure of a document such as modulation of line width and interword spacing as well as modification of character fonts. The presence of the code word does not visibly degrade the document, but can be readily detected by making a comparison with the original. Standard document handing operations such as photocopying and scanning do not remove the mark.

The same idea may be extended to include the protection of images. In this paper, we begin by specifying the requirements that an effective image watermarking scheme must possess. A review of current techniques is presented and novel techniques based on image transforms are then described.

## 1.1 REQUIREMENTS FOR WATERMARKING ALGORITHM

The work in this paper examines strategies for the watermark to meet the following criteria:

Image Processing And Its Applications, 4–6 July 1995 Conference Publication No. 410, © IEE 1995.

- The image must not be visibly degraded by the presence of the mark while at the same time a unique identifier with high information content is produced.
- The mark must be readily recoverable by some form of comparison with the original image.
- The mark must be strongly resistant to detection and decoding without access to the original. It must be strongly resistant to attack and it should cause a significant loss of image quality for it to be destroyed. In addition, the mark must be tolerant to reasonable quality lossy compression of the image.

## 1.2 DIGITAL COMMUNICATIONS

The task of embedding a watermark in an image and detecting and decoding the mark may be regarded as a problem in digital communications. There are three components [2] in the solution of this problem:

- Forms of transmission pulse must be identified that can transmit information reliably and yet introduce no artifacts visible even to a very careful observer.
- Digital signal modulation techniques are required to place the desired information onto the transmitted pulses.
- Innovative error-control coding and digital signature techniques are required to ensure reliable and secure communication of the mark as well as authentication of the encoded message.

It will be assumed without loss of generality that the mark is encoded in the form of a binary bit string.

The factors affecting the choice of form of transmission pulses are quite complex. First, there is the need for robustness. Any operation that may be carried out on the image can degrade transmission of the watermark. The second factor is visibility. Intuitively, one can see that less information can be hidden on flat featureless regions of the image. It should be possible to incorporate more information into those parts of the image that contain more texture or around edges. Psychovisual phenomena are obviously factors in the transmission of hidden information.

Kurak and McHugh [3] have considered the possible application of redundant features in an image to the transmission of information. Their concern was the transmission of dangerous viruses (or "Trojan horse programs") in the low order bits of a data stream. They note that merely viewing an image is not sufficient for detecting the presence of some form of corruption. Depending on the texture of the image and the quality of a computer monitor it is possible

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to exploit the limited dynamic range of the human eye to hide low quality images within other images. Walton [4] has developed a technique for introducing checksums in the low order bits of an image to prevent unauthorized tampering. Dautzenberg and Boland [5] examined using the low order bits as a possible part of a scheme for introducing watermarks into images. This approach gave very poor results because standard lossy compression schemes, such as JPEG [6], tend to have the effect of randomizing the low order bits during the quantization stage of image compression.

## 2 THE BLOCK MEAN APPROACH

Dautzenberg and Boland [5] and Caronni [7] have investigated another simple technique for embedding watermarks in images. An image may be divided up into blocks. The mean of each block may then be incremented to encode a '1' or decremented to encode a '0' (or vice versa). This is termed bi-directional coding. Alternatively, the mean may be incremented to encode a '1' and be left untouched to encode a '0'. This is termed unidirectional coding. Of the two forms of coding bi-directional coding is the more robust but unidirectional coding has the advantage that it is possible to arrange matters that a watermark can be detected without comparing the image to the original. Dautzenberg and Boland examined two different approaches for placing the blocks inside images:

Chessboard pattern: The blocks are arranged side by side to tile over the entire image.

Blocks with borders pattern: The blocks are arranged side by side, but are surrounded by a border which is not marked.

The block-mean approach suffers from the grave disadvantage that an enemy that is in possession of a number of independent copies of the image can compare the different copies and read most, if not all, of the encoded message. Caronni shows that the expected number of undetected bits decreases exponentially with the number of copies. Caronni combats this particular weakness by randonizing both the size of the blocks as well as the positions of the blocks inside the image.

Despite its simplicity, the block-mean method of marking images has proven to be highly robust to lossy image compression, photocopying and colour scanning and dithering.

The number of bits that may be encoded using the blockmean approach equals the number of blocks, and this in turn depends on the size of the image and the block size, as well as the width of borders around blocks. Realistically, the number of bits that one can expect to encode is in the order of one hundred bits. This capacity may be adequate for some applications, even after taking into account the need for redundancy in the code for error detection and correction as well as code word authentication. However, this capacity is quite tiny in comparison with the storage required for the image.

## 3 THE WATERMARKING ALGORITHM

It is possible to achieve much higher storage capacities using image transform coding techniques [8]. Candidate image transforms are based on standard image compression techniques and include the use of the Discrete Cosine Transform [6, 9], Wavelet Transforms [10], Walsh-Hadamard Transform [8, 11] and the Fast Fourier Transform.

### 3.1 THE ALGORITHM

This subsection describes the watermarking algorithm. First, a simple form of modulation for placing bits on an image is outlined. Second, a technique for determining the number of bits to be placed at given locations in the image is also described.

3.1.1 Amplitude Modulation The following algorithm, which is a hybrid between amplitude modulation and frequency shift keying has been applied to watermarking:

- 1. Divide image into blocks.
- 2. Subtract the mean of the block from each pixel in the block.
- 3. Normalize pixel values within each block so that they range between -127 and 127.
- 4. Carry out transform on image block.
- Modulate selected coefficients of the transformation (e.g.using bi-directional coding).
- Reverse the transformation and replace the image block in the image.

Watermark detection is easily performed by carrying out the above operations on the original image and the watermarked image in parallel and comparing the values of the coefficients. Note that the block-mean approach is a special case of the above. If the Discrete Cosine Transform (or "DCT") is used in step 4 above to transform the image sub-blocks then the mean value will be one of the coefficients present, although it will never be marked unless step 2 is removed.

Zhao and Koch [12] have investigated an approach to watermarking images based on the JPEG image compression algorithm. Their approach is to segment the image into individual 8 × 8.blocks.. Only eight coefficients occupying particular positions in the 3 × 8 block of DCT coefficients can be marked. These comprise the low frequency components of the image block, but exclude the mean value coefficient (at coordinate (0,0)) as well as the low frequencies at coordinates (0,1) and (1,0). Zhao and Koch also take the precaution of placing the blocks at random positions in the image in order to make a successful attack by an enemy less likely.

3.1.2 The number of bits The first stage in embedding a bit stream in an image is to determine the number of bits that can be placed into a given image block. A very simple method based on Parseval's Theorem [2] will now be described.

In a highly textured image block energy tends to be more evenly distributed amongst the different DCT coefficients. In a flat featureless portion of the image the dominant energy components tend to lie at the low frequency end of the spectrum.

As stated above, the aim is to place more information bits where they are least noticeable. This may be accomplished by using a simple thresholding technique. The steps are as follows:

1. Sort the DCT coefficients in order according to absolute magnitude.



Figure 1: Standard grey scale image of Lena. The size of image is 512 x 512 pixels.

- Starting with the largest, sum the energies in each
  component, until a predetermined threshold (usually a simple proportion ε of the total energy) is
  exceeded.
- Set the number of bits to be placed in this block equal to the number of components required to exceed the threshold.

This approach of placing bits where they are least visible can be a potential weakness. Lossy image compression algorithms are designed to disregard redundant information. Information bits placed within textured areas of the image are therefore more vulnerable to attack. Therefore, there is a compromise to be reached between hiding a large number of information bits where they can least be seen, but where they can be attacked by image compression algorithms, or placing fewer bits on less textured but safer portions of the image. This may be achieved by opting for a moderately low value of threshold (e.g.  $\epsilon \approx 0.7$ ).

It is worth noting that the number of bits that can be encoded using image transforms far exceeds that of the block-mean approach. The expected capacity is in the order of 1000 bits for a typical image. In the case of Zhao and Koch's method 8 bits of information are encoded into each  $8\times 8$  block. If the blocks are tiled over the image then overall one could obtain a maximum code rate of 0.125 bits/pixel.

## 3.2 OTHER TRANSFORMS

The DCT is not the only image transform that may be used for watermarking. Other transforms that may be used include:

Walsh transforms: The Walsh-Hadamard transform [8, 13] can be viewed as a generalisation of the block-mean approach described above. In this



Figure 2: Lena weakly watermarked using blocks with borders.

composed entirely of elements with value 1 or -1 only. The Walsh-Hadamard transform can be implemented using as a fast algorithm.

Wavelet transforms: The wavelet transform has been shown to give good compact representation of image texture. This suggests that it may have powerful watermarking properties. Fast wavelet transforms exist and are described and implemented by Press et al. [10].

The FFT: The FFT may also be applied. The great advantage of the FFT is that it allows the separation of magnitude and phase for modulation purposes.

In each of these transformations it is assumed that the block size is an integer power of two.

It is important to note the differences between the aims in image compression and in designing watermark transmission pulses. In image compression one is given a number (hopefully a small number) of coefficients with which to reproduce a good approximation to the original image. A small change in the coefficients should make little difference to the approximation to the image. However, the reverse does not necessarily hold since a small change to the image can result in a large change in the coefficients. This kind of behaviour is obviously extremely undesirable when the embedded information depends on the value of these coefficients. The severity of this effect depends on the image transforms being used. Ill-conditioning tends to be much more severe for image transformations whose basis images are data-dependent (e.g. the singular value decomposition or SVD). Image transformations with fixed basis images (e.g. DCT and wavelet transforms) tend to



Figure 3: Lena strongly watermarked using blocks with



Figure 4: Lena watermarked using fourth order Daubechy wavelets.

## 3.3 OTHER ISSUES

The material in this paper thus far has described methods that may be used for placing a watermark in an image. However, we have not addressed other components in the watermarking problem, namely the reliable and secure transmission of the watermark.

Reliable communication was proven by Shannon [14] to be theoretically possible providing the information rate does not exceed a threshold known as the channel capacity. The Shannon limit may be approached by applying error control codes. Error control coding and modulation although often treated separately are in fact closely related. For example, in the implementation of the watermarking algorithm described above, the process of using only selected coefficients and ignoring others, is an example of a spherical code. In a spherical code [11] the points in signal space lie on the surface of a sphere whose radius is determined by the energy content. This code has mild error correcting properties with the result that low values of energy threshold result in significantly improved performance in the transmission of the mark. More robust error correction techniques can be employed if necessary. Methods for error control coding are described by Sweeney [15], Chambers [11] and Blahut [16].

In addition to reliability there may also be a need for security. Many different encryption algorithms exist to carry this out. A good introduction is presented by Chambers [11]. A more mathematical treatment of the subject is given by Konheim [17].

## 4 RESULTS

Figure 1 shows a standard image without a watermark. Figure 2 shows the same image watermarked using bidirectional coding and the blocks with borders method described above. The inner block size is 12 and the depth of modulation is 3. Figure 3 shows the same image strongly

The mark is for all intents and purposes invisible in figure 2 but may be detected quite readily even after lossy compression and scanning has been carried out. The watermark conveys 441 bits of information and the standard message reads: "012345 This is a watermark...".

Figure 4 shows "Lena" watermarked using the Daubechy Wavelet Transform. The block size is 8 and the depth of modulation is 5. The watermark conveys 12882 bits of information. The standard message is repeated to occupy all the available capacity. Note that the presence of the mark introduces no visible degradation.

The question arises as to what a watermark actually looks like. Figure 5 shows the difference between the wavelet marked version of the standard image and the original, scaled by a factor of 32. Figure 6 shows the image of a watermark produced using the DCT. As in the case of the wavelet watermark, the block size is 8 and the depth of modulation is 5. The number of bits encoded in the DCT watermark equals 9342 and the standard test message is repeatedly encoded as before.

The DCT watermarked image was compressed using JPEG with default settings. The quality factor was set to 90 and no smoothing was used. The compression ratio was 14:1. The binary bit pattern in the watermark was recovered with a bit error rate of 14%. Since the errors tended to occur in bursts it was actually possible to decipher ASCII characters from the raw bit stream without resorting to error-control codes. The same experiment was repeated using images marked using Daubechy wavelets and the Walsh-Hadamard transform. The corresponding bit error rates were 18.5% and 20.5% respectively.

It is apparent upon examining the watermarks in figure 5 and figure 6 that the transform based marking schemes possess a number of desirable features. First, one can mark according to the distribution of energy within the coefficients. In this way, one can place watermarks where

... ... .

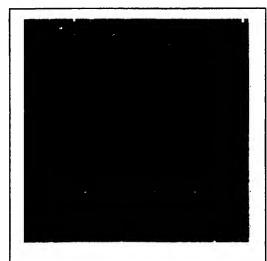


Figure 5: The watermark produced using Daubechy wavelets.

As a result, the watermark exhibits a ghost-like resemblance to the original image. It is also very interesting to note that the watermark pattern on the flat regions of the image (such as Lena's shoulder) bears a superficial resemblance to military camouflage. Second the watermark is irregularly distributed over the entire image sub-block which makes it more difficult to detect and for enemies in possession of independent copies of the image to decode and read the mark.

## 5 CONCLUSION

This paper has outlined a scheme for embedding robust watermarks onto digital images. The watermarks are designed to be invisible even to a careful observer but contain sufficient information to uniquely identify both the origin and intended recipient of an image with a very low probability of error.

Future work will involve the further development of robust error correction codes and digital signature techniques. In addition, the authors will attempt to envisage possible attacks on the integrity and security of the mark and to devise suitable countermeasures.

## References

- [1] Brassil, J., Low, S., Maxemchuk, N., and O'Gorman, L., 1994, "Electronic Marking and Identification Techniques to Discourage Document Copying," in "INFOCOM 94".
- [2] Bissell, C. C. and Chapman, D. A., 1992, "Digital Signal Transmission". Cambridge University Press.
- [3] Kurak, C. and McHugh, J., 1992, "A cautionary note on image downgrading," in "Proc. 8th Annual Computer Security Applications Conference", (San Antonio).
- [4] Walton, S., 1995, "Image Authentication for a Slip-

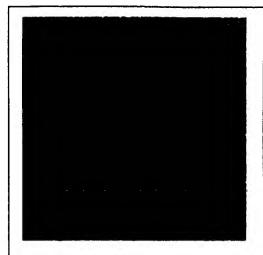


Figure 6: The watermark produced using the Discrete Cosine Transform.

- [5] Dautzenberg, C. and Boland, F. M., "Watermarking Images," tech. rep., Department of Electronic and Electrical Engineering, Trinity College Dublin, 1994.
- [6] Pennebaker, W. B. and Mitchell, J. L., 1993, "JPEG Still Image Compression Standard". New York: Van Nostrand Reinhold.
- [7] Caronni, G., "Assuring Ownership Rights for Digital Images." Submitted for publication in ASI-ACRYPT'94, 1994.
- [8] Clarke, R. J., 1985, "Transform Coding of Images". London: Academic Press.
- [9] Rao, K. R. and Yip, P., 1990, "The Discrete Cosine Transform: algorithms, advantages, applications". Academic Press.
- [10] Press, W., Teukolsky, S., Vetterling, W., and Flannery, B., 1992, "Numerical Recipes in C". Cambridge University Press, second ed.
- [11] Chambers, W. G., 1985, "Basics of Communications and Coding". Oxford Science Publications, Clarendon Press Oxford.
- [12] Zhao, J. and Koch, E., "Embedding Robust Labels Into Images For Copyright Protection," tech. rep., Fraunhofer Institute for Computer Graphics, Darmstadt, Germany, 1994.
- [13] Pearson, D., 1991, "Image Processing". Essex Series in Telecommunication and Information Systems, McGraw-Hill.
- [14] Shannon, C. E., 1948, "A mathematical theory of communication," Bell Sys. Tech. J., 27, 379-423 and 623-56.
- [15] Sweeney, P., 1991, "Error Control Coding: An Introduction". Prentice-Hall.
- [16] Blahut, R. E., 1983, "The theory and practice of error control codes". Addison-Wesley.
- [17] Konheim, A. G., 1981, "Cryptography: A primer". New York: John Wiley and Sons.

Attrepment # applications dynamically suspend or resume processes in order to degraded. We then propose a way of controlling the number of that if the number of runnable processes belonging to a parallel continuously varying, the question arises of how an application time. In such an environment, where the machine load is processors executing it, its performance can be significantly application significantly exceeds the effective number of physical should maximize its performance while being fair to other users of style with multiple parallel applications executing at the same Shared-memory multiprocessors are frequently used in a time-sharing multiprocessors, MP, gang scheduling performance ensure good performance. The optimal number of runnable processes for each application is determined by a centralized server and runnable processes associated with an application dynamically, to the system. In this paper, we address this issue. We first show

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scheme is now running on the Encore Multimax and we show how it

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The watermark-based lazy buddy system for dynamic memory management

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            about 33\% faster than the standard buddy system.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           resulting implementation is simpler, and experimental data shows it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            within that space. In this paper we describe a different lazy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                to be up to 12\% faster than the watermark-based buddy system and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             coalescing policy, called the DELAY-2 algorithm, that focuses
ensures that the memory space can be completely shared
                                                      the system memory is coalesced back to its original state. This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Inexpensive
```

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logging, multicasting
                                                                                                                                                                                                                                                                                performance, dbms, database, Camelot, Mach, non-blocking commit protocols
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Operating Systems Review
Camelot is a transaction facility that provides a rich model of
                                                  performance of the transaction manager of the Camelot system.
                                                                                           This paper provides a detailed examination of the design and
                                                                                                                                                                              There is currently much interest in incorporating transactions into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Analysis of transaction management performance
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Computer Science Department, Columbia University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Duchamp89
                                                                                                                                        both operating systems and general-purpose programming languages.
                                                                                                                                                                                                                                                                                                                                     177 190
                                                                                                                                                                                                                                                                                                                                                                            December 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Litchfield Park, AZ, 3--6 December 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dan Duchamp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InProceedings
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Proceedings of the 12th ACM Symposium on Operating System Principles
```

The conclusions of this study are: a simple optimization two-phase commit reduces logging activity of distributed

transactions; non-blocking commit is practical for some

execute the protocols that ensure atomicity.

applications. The transaction manager's principal function is to

transactions intended to support a wide variety of general-purpose



watermark detection Homepage   Advanced Search
Search using: HotBot Google Ask Jeeves
CUSTOM WEB FILTERS Tools   HotBot Skins   Preferences
Date: Before May 08 1995 [ Edit this Search ]
SPONSORED LINKS (filters not applied)
<ul> <li>Watermark Innovation         Research and development department of Watermark         www.watermark-innovation.com     </li> </ul>
<ul> <li>PhotoWatermark Pro         Protecting online pictures with copyright, logo, texts all in batch         PhotoWatermark.com     </li> </ul>
<ul> <li>PhotoMark         Add watermarks to images using your brand name or logo.     </li> <li>www.WekaSoft.com</li> </ul>
WEB RESULTS.by Co. 3 (Showing Results 1 - 10 of 15)
1. Gopy <b>Detection</b> Mechanisms for Digital Documents is that these schemes can easily be defeated by users who destroy the watermarks in this paper (for text documents), is that of a copy <b>detection</b> server [1, 11  I would not get the long of my again www-db.stanford.edu/pub/brin/1995/copy.ps - 0 B  Www-db.stanford.edu/pub/brin/1995/copy.ps - 0 B
2. IEEE???????????? Digital watermarking embedding computer generated hologram by error diffusion methods Edge Detection and Image Compression Heeburm Ryu, Yoshikazu Miyanaga Koji ieejhb.hit.ac.jp/sibren-prg/ieee.html - 8 KB
3. The Slab Allocator: An Object-Caching Kernel Memory Allocator Jeff of the system needs more pages; there are no arbitrary limits or watermarks Leak <b>Detection</b> The timestamps provided by auditing make it easy to implement a www.usenix.org/publications/library/proceedings/bos94/full_papers/bonwick.a - 52 KB

- DP: A library for building portable reliable distributed ...
- www.usenix.org/publications/library/proceedings/neworl/full\_papers/arnow.ps 0 B Upon detection of failure (seebelow), B' starts executing. ... to the primary to replenish its set, until the primary, having passed a high-watermark, sends them ...

## Army Builder

www.wolflair.com/rightframe.php?context=army\_builder&page=solutions\_to\_comm - 27 kB outputs a light grey "watermark" in the background on the printout. ... ... do is obtain the MOST RECENT version of a good virus **detection** program and run ... Army Builder

- z InProceedings %K Burrows89 %A Michael Burrows %A Mart{\'\i}n ...
- www.funet.fi/pub/OS/doc/bibliography/SOSP12.refdbms 31 KB dynamic memory management, DELAY-2 %x The watermark-based lazy ... the real authentication server and is thus open to %x detection by the ... P 167 176 %k performance,
- archive.cs.uu.nl/pub/MIDI/DOC/CD-ROM 90 KB displayed. ... EDC/ECC = Error **Detection** Code and Error Correction Code ... ... Once the person uses the correct key then the watermark will be removed from the image being The following is part 1 of a nice intro to CD technology written ...
- all radar detection to become ... collection.collectionscanada.ca/100/201/300/ctheory/backissues/log9406.txt - 64 KB Return-path: <LISTSERV@VM1.MCGILL.CA&gt; Received: from... Towards The Periphery =====Jean Baudrillard∼ As a watermark of unexpected ... it managed to escape
- I have turned to the **detection** of crime he has used for this ... 9. HIS LAST BOW by ARTHUR CONAN DOYLE [obi/Doyle/His.Last.Bow] This www.arts.cuhk.edu.hk/humftp/E-text/Doyle/lastbow.dyl - 101 KB The note is written upon ordinary cream-laid paper without watermark. ... The same great powers which
- open-systems.ufl.edu/mirrors/ftp.isc.org/usenet/comp.sources.unix/volume26/ 101 KB allocated under the mm package watermark system using ... ... as these" write "are a consequence of tests of FunnelWeb's **detection** of various ... list items are \*/X/\*10. Newsgroups: comp.sources.unix From: ross@spam.adelaide.edu.au ...

## « Previous Next »

Search for "watermark detection" using: HotBot, Ask Jeeves

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« <u>Previous</u>   Next »	14. <u>Aarhus University Computer Science Department</u> example, Ungar & Jackson report that for one application, the <b>watermark</b> scheme reduced helps swallow the pig), but does not help the collector detect when they www.daimi.au.dk/~jacobse/Papers/Thesis/gcthesis.ps - 0 B	13. FunnelWeb Hacker's Manual was accomplished by reworking the memory package to operate a <b>watermark</b> system 4.7 Analyser Recursion <b>detection</b> : Currently the FunnelWeb analyser flags, with an www.tug.org/tex-archive/web/funnelAC/hackman/h_manual.ps - 0 B	www.ibiblio.org/winsock/winsock-1.1/winsockx.rtf - 0 B	12. WinSockAPI error codes consistent with Microsoft C, you are advised to use the Windows Sockets error codes prefixed by "WSA" to ensure accurate error code	research.microsoft.com/~adya/pubs/tr.ps.gz - 0 B	11. Transaction Management for it has read object x. The validation mechanism failed to detect this behavior 44. Maintaining the Write Timestamp Information Using a Write-watermark These of	WEB RESULTS by くっぱい (Showing Results 11 - 14 of 14)	Date: Before May 08 1995 [ Edit this Search ]	CUSTOM WEB FILTERS	watermark detection  Homepage   Advanced Search Search using:    HotBot   Google   Ask Jeeves
	neme reduced helps	k system 4.7 Analyser		your brand name or logo. www.WekaSoft.com Place Your Ad Here	PhotoMark Add watermarks to images using	Photo Watermark Pro The most powerful watermarking tool for your online image protection PhotoWatermark.com	SPONSORED LINKS		Tools   HotBot Skins   Preferences	d Search



## STIC Search Report

## STIC Database Tracking Number: 129454

TO: Norman M Wright Location: CPK2 4A37

**Art Unit: 2134** 

Thursday, August 12, 2004

Case Serial Number: 09/527971

From: Terese Esterheld

**Location: EIC 2100** 

PK2-4B30

Phone: 308-7795

Terese.esterheld@uspto.gov

## Search Notes

Dear Examiner Wright,

Attached, please find the results of your search request for application 09527971. I have concentrated on finding information on Watermark detection and the priority date of May 8, 1995. Other requested aspects were also searched.

The best information was obtained using the date restriction in Hot Bot.

Items have been marked that may be of value to you. Please look over the complete package as other items may also be of use.

Please let me know if you need additional information on this search.

Thank you for coming to EIC 2100.

Terese Esterheld



Items Description Set 745 S1 AU=(RHOADS, G? OR RHOADS G? OR ALATTAR, A? OR ALATTAR A? OR SHARMA, R? OR SHARMA R?) S2 94 S1 AND IC=H04L? 55 S1 AND IC=H04L-009? s3 File 347: JAPIO Nov 1976-2004/Apr(Updated 040802) (c) 2004 JPO & JAPIO File 348: EUROPEAN PATENTS 1978-2004/Aug W01 (c) 2004 European Patent Office File 349:PCT FULLTEXT 1979-2002/UB=20040805,UT=20040729 (c) 2004 WIPO/Univentio File 350: Derwent WPIX 1963-2004/UD, UM &UP=200451 (c) 2004 Thomson Derwent

3/5/1 (Item 1 from file: 348) DIALOG(R) File 348: EUROPEAN PATENTS (c) 2004 European Patent Office. All rts. reserv. 01658729 IMAGE MANAGEMENT SYSTEM AND METHODS USING DIGITAL WATERMARKS SYSTEME DE GESTION D'IMAGE ET EMPLOI DE FILIGRANES NUMERIQUES PATENT ASSIGNEE: Digimarc Corporation, (2160503), Suite 250, 19801 SW 72nd Avenue, Tualatin, OR 97062, (US), (Applicant designated States: all) LOFGREN, Neil, E., 163 Palos Verdes, White Salmon, WA 98672, (US) RHOADS, Geoffrey, B., 2961 S.W. Turner Road, West Linn, OR 97068, (US PATENT (CC, No, Kind, Date): WO 2003079606 030925 EP 2003716542 030312; WO 2003US7776 030312 APPLICATION (CC, No, Date): PRIORITY (CC, No, Date): US 100233 020313 DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LI; LU; MC; NL EXTENDED DESIGNATED STATES: AL; LT; LV; MK INTERNATIONAL PATENT CLASS: H04L-009/00; G06K-009/62; H04L-009/32; H04B-001/66 LEGAL STATUS (Type, Pub Date, Kind, Text): 031119 Al International application. (Art. 158(1)) Application: Application: 031119 Al International application entering European phase LANGUAGE (Publication, Procedural, Application): English; English; English 3/5/2 (Item 2 from file: 348) DIALOG(R) File 348: EUROPEAN PATENTS (c) 2004 European Patent Office. All rts. reserv. 01574040 DIGITALLY WATERMARKING CHECKS AND OTHER VALUE DOCUMENTS CHEQUES A FILIGRANAGE NUMERIQUE ET AUTRES DOCUMENTS DE VALEUR PATENT ASSIGNEE: Digimarc Corporation, (3385120), Suite 250, 19801 SW 72nd Avenue, Tualatin, OR 97062, (US), (Applicant designated States: all) INVENTOR: CARR, J., Scott, 22655 S.W. Grahams Ferry Road, Tualatin, OR 97062, (US) RHOADS, Geoffrey, B., 2961 S.W. Turner Road, West Linn, OR 97068, (US) HIEN, William, C., III, 151 Indiantown Road, Glenmoore, PA 19343-1412, (US) MILLER, Marc, D., P.O. Box 596, Corte Madera, CA 94976, (US) HAWES, Jonathan, L., 2502 Jolie Point Road, West Linn, OR 97068, (US) ELOVITZ, Andrea, Nicole, 5655 Southwood Drive, Lake Oswego, OR 97035, (US) STEWART, Steven, W., 4730 S.W. Joshua Street, Tualatin, OR 97062, (US PATENT (CC, No, Kind, Date): WO 2003019449 030306 APPLICATION (CC, No, Date): EP 2002766213 020830; WO 2002US27954 020830 PRIORITY (CC, No, Date): US 316851 P 010831; US 327687 P 011005; US 352652 P 020128; US 172769 020614; US 172506 020614 DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI INTERNATIONAL PATENT CLASS: G06F-017/60; H04L-009/00; G06K-009/00; H04K-001/00 LEGAL STATUS (Type, Pub Date, Kind, Text): Application: 030502 A2 International application. (Art. 158(1)) 030502 A2 International application entering European Application:

phase

LANGUAGE (Publication, Procedural, Application): English; English; English

27

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DIALOG(R) File 348: EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.
01530784
CONTENT IDENTIFIERS TRIGGERING CORRESPONDING RESPONSES
IDENTIFICATEURS DE CONTENU DECLENCHANT DES REPONSES CORRESPONDANTES
PATENT ASSIGNEE:
  Digimarc Corporation, (2160505), 19801 SW 72nd Avenue, Suite 100,
    Tualatin, Oregon 97062, (US), (Applicant designated States: all)
INVENTOR:
  RHOADS, Geoffrey, B., 2961 SW Turner Road, West Linn, OR 97068, (US)
  LEVY, Kenneth, L., 110 NE Cedar Street, Stevenson, WA 98648, (US
PATENT (CC, No, Kind, Date):
                              WO 2002093823 021121
                              EP 2002736807 020514; WO 2002US15187 020514
APPLICATION (CC, No, Date):
PRIORITY (CC, No, Date): US 858189 010514
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04L-009/00; H04K-001/00
LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application:
                 030115 Al International application. (Art. 158(1))
Application:
                  030115 Al International application entering European
                            phase
 Application:
                  040616 Al International application. (Art. 158(1))
 Appl Changed:
                  040616 Al International application not entering European
                            phase
                  040616 Al Date application deemed withdrawn: 20031215
 Withdrawal:
LANGUAGE (Publication, Procedural, Application): English; English; English
 3/5/4
           (Item 4 from file: 348)
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.
01490287
DIGITAL WATERMARKING AND MAPS
FILIGRANAGE NUMERIQUE ET CARTES CONNEXES
PATENT ASSIGNEE:
  Digimarc Corporation, (2160505), 19801 SW 72nd Avenue, Suite 100,
    Tualatin, Oregon 97062, (US), (Applicant designated States: all)
INVENTOR:
  RHOADS, Geoffrey, B., 2961 SW Turner Road, West Linn, OR 97068, (US)
  BRUNDAGE, Trent, J., 16225 SW O'Neill Court, Tigard, OR 97223, (US)
  LOFGREN, Neil, E., 163 Palos Verdes, White Salmon, WA 98672, (US)
  PATTERSON, Philip, R., 25795 SW Meadowbrook Lane, Sherwood, OR 97140,
    (US)
  CLEMENTS, Lorie, R., 8007 SE 16th Avenue, Portland, OR 97202, (US
PATENT (CC, No, Kind, Date):
                              WO 2002071685 020912
                              EP 2002707961 020305; WO 2002US6858 020305
APPLICATION (CC, No, Date):
PRIORITY (CC, No, Date): US 800093 010305; US 833013 010410; US 284163 P
    010416; US 284776 P 010418; US 858336 010515; US 2954 011023; US 997400
    011128
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04L-009/00; H04L-015/34
LEGAL STATUS (Type, Pub Date, Kind, Text):
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021106 A1 International application. (Art. 158(1))

040414 Al International application. (Art. 158(1))

phase

phase

LANGUAGE (Publication, Procedural, Application): English; English; English

021106 Al International application entering European

040414 Al Date application deemed withdrawn: 20031006

040414 Al International application not entering European

Application:

Application:

Application:

Withdrawal:

Appl Changed:

```
(Item 5 from file: 348)
 3/5/5
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.
01353388
DIGITAL WATERMARK SCREENING AND DETECTION STRATEGIES
RECHERCHE DE FILIGRANE NUMERIQUE ET STRATEGIES DE DETECTION
PATENT ASSIGNEE:
  Digimarc Corporation, (2160504), 19801 SW 72nd Avenue, Suite 250,
    Tualatin, Oregon 97062, (US), (Applicant designated States: all)
INVENTOR:
  RHOADS, Geoffrey, B., 2961 SW Turner Road, West Linn, OR 97068, (US)
  SHARMA, Ravi, K., 2557 NW Overlook Drive, Apartment 536, Hillsboro, OR
   97124, (US
PATENT (CC, No, Kind, Date):
                              WO 2001069518 010920
                              EP 2001914752 010307; WO 2001US7373
APPLICATION (CC, No, Date):
                                                                    010307
PRIORITY (CC, No, Date): US 526982 000315
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: G06K-009/00; G06K-009/36; H04L-009/00;
  H04N-007/16; H04N-011/00; H04N-009/64; H04K-001/00; G07D-007/00;
  H03M-001/22
LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application:
                  011114 Al International application. (Art. 158(1))
Application:
                  011114 Al International application entering European
                            phase
                  030507 Al International application. (Art. 158(1))
Application:
Appl Changed:
                  030507 Al International application not entering European
                            phase
                  030507 Al Date application deemed withdrawn: 20021016
Withdrawal:
LANGUAGE (Publication, Procedural, Application): English; English; English
 3/5/6
           (Item 6 from file: 348)
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.
01342224
WATERMARK ENCODER AND DECODER ENABLED SOFTWARE AND DEVICES
WASSERZEICHENCODIERER
                          UND
                                  SOFTWARE
                                               UND
                                                       EINRICHTUNGEN
                                                                        MTT
   DECODIERERAKTIVIERUNG
LOGICIELS ET DISPOSITIFS ACTIVES PAR DES CODEURS ET DES DECODEURS DE
   FILIGRANE
PATENT ASSIGNEE:
  Digimarc Corporation, (2160503), Suite 250, 19801 SW 72nd Avenue,
    Tualatin, OR 97062, (US), (Applicant designated States: all)
INVENTOR:
  RAMOS, Daniel, O., 16869 SW Hargis Road, Beaverton, OR 97007, (US)
  JONES, Kevin, C., 4850 NW Neskowin Ave., Portland, OR 97229, (US)
  RHOADS, Geoffrey, B., 2961 SW Turner Road, West Linn, OR 97068, (US
LEGAL REPRESENTATIVE:
  Meddle, Alan Leonard (33762), Forrester & Boehmert Pettenkoferstrasse
    20-22, 80336 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1257921 A1 021120 (Basic)
                              WO 2001061508 010823
APPLICATION (CC, No, Date):
                              EP 2001909242 010214; WO 2001US4812 010214
PRIORITY (CC, No, Date): US 183681 P 000219; US 191778 P 000324; US 636102
    000810
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: G06F-013/00; G06F-015/16;
                                                       H04L-009/00
CITED PATENTS (WO A): US 5956716 A; US 5841978 A
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NOTE:
  No A-document published by EPO
LEGAL STATUS (Type, Pub Date, Kind, Text):
                  011017 A1 International application. (Art. 158(1))
 Application:
 Application:
                  011017 A1 International application entering European
                            phase
 Application:
                  021120 Al Published application with search report
 Examination:
                  021120 Al Date of request for examination: 20020709
LANGUAGE (Publication, Procedural, Application): English; English; English
           (Item 7 from file: 348)
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.
01234195
METHODS AND SYSTEMS FOR CONTROLLING COMPUTERS OR LINKING TO INTERNET
    RESOURCES FROM PHYSICAL AND ELECTRONIC OBJECTS
METHODEN UND SYSTEME ZUR RECHNERSTEUERUNG ODER VERBINDUNG VON PHYSISCHEN
    ODER ELEKTRONISCHEN OBJEKTEN MIT INTERNET-RESOURCEN
PROCEDES ET SYSTEMES DE CONTROLE D'ORDINATEURS OU DE LIAISON AUX RESSOURCES
    INTERNET D'OBJETS PHYSIQUES ET ELECTRONIQUES
PATENT ASSIGNEE:
  Digimarc Corporation, (2160503), Suite 250, 19801 SW 72nd Avenue,
    Tualatin, OR 97062, (US), (Applicant designated States: all)
INVENTOR:
  RHOADS, Geoffrey, B., 304 SW Tualatin Loop, West Linn, OR 97068, (US)
  RODRIGUEZ, Tony, F., 3104 NE 31st Avenue, Portland, OR 97212, (US)
  DAVIS, Bruce, L., 15599 Village Drive, Lake Oswego, OR 97034, (US)
  CARR, J., Scott, 7814 SW 189th Avenue, Beaverton, OR 97007, (US)
  GROSSI, Brian, J., 220 Sleeper Avenue, Mountain View, CA 94040, (US)
  MCKINLEY, Tyler, J., 17020 SW Tracy Avenue, Lake Oswego, OR 97035, (US)
  SEDER, Phillip, A., 1600 Palatine Street, Portland, OR 97219, (US)
  PERRY, Burt, W., 15344 Provincial Hill Way, Lake Oswego, OR 97035, (US)
  HEIN, William, C., III, 151 Indiantown Road, Glenmoore, PA 19343-1412,
    (US)
  MACINTOSH, Brian, T., 1200 Fairway Road, Lake Oswego, OR 97034, (US
LEGAL REPRESENTATIVE:
  Meddle, Alan Leonard et al (33762), Forrester & Boehmert
    Pettenkoferstrasse 20-22, 80336 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1185967 A1 020313 (Basic)
                              WO 200070585 001123
APPLICATION (CC, No, Date):
                              EP 2000930749 000515; WO 2000US13333 000515
PRIORITY (CC, No, Date): US 314648 990519; US 342688 990629; US 342689
    990629; US 342971 990629; US 343101 990629; US 343104 990629; US 141468
    P 990629; US 151586 P 990830; US 158015 P 991006; US 163332 P 991103;
    US 164619 P 991110; US 531076 000318; US 543125 000405; US 547664
    000412; US 552998 000419
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: G09C-005/00; G06F-017/00; G06K-007/00;
  G06K-009/00; G06K-009/36; G06K-019/06; H04L-009/00
CITED PATENTS (WO A): US 5761686 A; US 6052486 A; US 5930767 A; US
  5841886 A ; US 5926550 A ; US 5862260 A ; US 5708717 A ; US 5168147 A ;
  US 5278400 A
NOTE:
  No A-document published by EPO
LEGAL STATUS (Type, Pub Date, Kind, Text):
                 010117 Al International application. (Art. 158(1))
 Application:
                  010117 Al International application entering European
 Application:
                            phase
 Application:
                  020313 Al Published application with search report
                  020313 Al Date of request for examination: 20011017
 Examination:
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LANGUAGE (Publication, Procedural, Application): English; English; English

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(Item 8 from file: 348)
3/5/8
DIALOG(R) File 348: EUROPEAN PATENTS
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01181170
COUNTERFEIT DETERRENCE SYSTEM
VORRICHTUNG ZUR ABWEHR VON NACHAHMUNGEN
SYSTEME DE DISSUASION RELATIF AUX CONTREFACONS
PATENT ASSIGNEE:
  Digimary Corporation, (2160504), 19801 SW 72nd Avenue, Suite 250,
    Tualatin, Oregon 97062, (US), (Applicant designated States: all)
INVENTOR:
  RHOADS, Geoffrey, B., 304 SW Tualatin Loop, West Linn, OR 97068, (US)
  DAVIS, Bruce, L., 15599 Village Drive, Lake Oswego, OR 97034, (US)
  CARR, J., Scott, 7814 SW 189th Avenue, Beaverton, OR 97007, (US
LEGAL REPRESENTATIVE:
 Meddle, Alan Leonard et al (33761), FORRESTER & BOEHMERT,
    Pettenkoferstrasse 20-22, 80336 Munchen, (DE)
                             EP 1142190 A1 011010 (Basic)
PATENT (CC, No, Kind, Date):
                              WO 200036785 000622
APPLICATION (CC, No, Date):
                              EP 99967414 991216; WO 99US30217 991216
PRIORITY (CC, No, Date): US 112955 P 981218
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04L-009/00; H04L-009/32; C09D-011/00
CITED PATENTS (WO A): US 5825892 A ; US 5671277 A ; US 5453968 A ; US
  5796824 A ; US 5800600 A
NOTE:
  No A-document published by EPO
LEGAL STATUS (Type, Pub Date, Kind, Text):
                 000816 Al International application. (Art. 158(1))
 Application:
                  000816 Al International application entering European
 Application:
                            phase
                  011010 Al Published application with search report
 Application:
 Examination:
                  011010 Al Date of request for examination: 20010607
LANGUAGE (Publication, Procedural, Application): English; English; English
3/5/9
           (Item 9 from file: 348)
DIALOG(R) File 348: EUROPEAN PATENTS
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01130032
Method and apparatus for encoding audio with auxiliary digital data
Verfahren und Vorrichtung zur Kodierung von Audiosignalen mit zusatzlichen
    digitalen Daten
Procede et dispositif de codage de signaux audio avec des signaux
    auxiliaires
PATENT ASSIGNEE:
  Digimarc Corporation, (2160503), Suite 500, One Centerpoint Drive, Lake
    Oswego, Oregon 97035-8615, (US), (Applicant designated States: all)
INVENTOR:
   Rhoads, Geoffrey B., 363 S.W. Tualatin Loop, West Linn, Oregon 97068,
    (US
LEGAL REPRESENTATIVE:
  Meddle, Alan Leonard et al (33761), FORRESTER & BOEHMERT
    Franz-Joseph-Strasse 38, 80801 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 987855 A2 000322 (Basic)
APPLICATION (CC, No, Date):
                             EP 99124921 941116;
PRIORITY (CC, No, Date): US 154866 931118; US 215289 940317; US 327426
    941021
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC;
  NL; PT; SE
EXTENDED DESIGNATED STATES: LT; SI
RELATED PARENT NUMBER(S) - PN (AN):
  EP 737387 (EP 95909196)
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ABSTRACT EP 987855 A2
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A method of processing audio to convey auxiliary information therewith without audible evidence of audio alteration is provided, in which the audio is represented by digital data, and the auxiliary information comprises a data string having plural bit positions, each with a "1" or "0" value. The method comprises: receiving the plural bit auxiliary data; providing noise data; processing the plural bit auxiliary data and the noise data to yield intermediate data; and summing the intermediate data with the audio data to yield encoded audio; wherein the audio is repeatedly encoded from each of plural non-overlapping excerpts of the encoded audio.

ABSTRACT WORD COUNT: 102

NOTE:

Figure number on first page: 6

LEGAL STATUS (Type, Pub Date, Kind, Text):

Assignee: 000510 A2 Transfer of rights to new applicant: Digimarc

Corporation (2160504) 19801 SW 72nd Avenue, Suite 250 Tualatin, Oregon 97062 US

Application: 20000322 A2 Published application without search report Examination: 20000322 A2 Date of request for examination: 19991214

LANGUAGE (Publication, Procedural, Application): English; English; English

3/5/10 (Item 1 from file: 349)
DIALOG(R) File 349: PCT FULLTEXT

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01129425 \*\*Image available\*\*

SYSTEMS AND METHODS FOR AUTHENTICATION OF PRINT MEDIA SYSTEMES ET PROCEDES D'IDENTIFICATION DE MEDIAS IMPRIMES

Patent Applicant/Assignee:

DIGIMARC CORPORATION, 19801 SW 72nd Avenue, Suite 100, Tualatin, OR 97062, US, US (Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

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BRUNK Hugh L, 2871 SE Kelly Street, Portland, OR 97202, US, US (Residence), US (Nationality), (Designated only for: US

Legal Representative:

STEWART Steven W (agent), Digimarc Corporation, 19801 SW 72nd Avenue, Suite 100, Tualatin, OR 97062, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200451917 A1 20040617 (WO 0451917)

Application: WO 2003US37802 20031126 (PCT/WO US03037802)

Priority Application: US 2002430014 20021128; US 2003440593 20030115; US 2003466926 20030430; US 2003475389 20030602; US 2003523159 20031117 Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) BW GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: H04L-009/00

International Patent Class: G06F-011/30

Publication Language: English

Filing Language: English Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 24460

## English Abstract

This disclosure describes methods for using embedded auxiliary signals in documents for copy detection and other applications. In an application, the auxiliary signal is formed as an array of elements selected from a set of print structures (106) with properties that change differently in response to copy operations. These changes in properties of the print structures that carry the embedded auxiliary signal are automatically detectable. The extent to which the auxiliary data is detected forms a detection metric used in combination with one or more other metrics to differentiate copies from originals. Robust and fragile watermarks are used in Image Replacement Documents for a variety of applications. Digital watermarks act as on-board mediators in authentication of a variety of printed documents. Finally, digital watermarks are used to help manage quality of the scanners used in imaging systems.

## French Abstract

L'invention concerne des procedes d'utilisation de signaux auxiliaires integres dans des documents pour la detection de copies et autres applications. Conformement a une application, le signal auxiliaire se presente sous la forme d'une rangee d'elements selectionnes a partir d'un ensemble de structures d'impression (106) dotees de proprietes qui varient en reponse aux operations de copies. Ces changements de proprietes des structures d'impression portant les signaux auxiliaires integres sont automatiquement detectables. La mesure pour laquelle les donnees auxiliaires sont detectees forme une metrique de detection utilisee en combinaison avec une ou plusieurs autres metriques en vue de differencier les copies de l'original. Des filigranes robustes et fragiles sont utilises dans des documents de remplacement d'images pour une variete d'applications. Des filigranes numeriques agissent comme mediateurs incorpores dans l'authentification d'une variete de documents imprimes. En dernier lieu, des filigranes numeriques sont utilises en vue de contribuer a la gestion de qualite des scanneurs utilises dans des systemes d'imagerie.

Legal Status (Type, Date, Text)
Publication 20040617 Al With international search report.

3/5/11 (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01049538 \*\*Image available\*\*

IMAGE MANAGEMENT SYSTEM AND METHODS USING DIGITAL WATERMARKS SYSTEME DE GESTION D'IMAGE ET EMPLOI DE FILIGRANES NUMERIQUES

Patent Applicant/Assignee:
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Patent Applicant/Inventor:

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(Residence), US (Nationality), (Designated only for: US
Legal Representative:
  CONWELL William Y (agent), Digimarc Corporation, Suite 250, 19801 S.W.
    72nd Avenue, Tualatin, OR 97062, US,
Patent and Priority Information (Country, Number, Date):
                        WO 200379606 A1 20030925 (WO 0379606)
  Patent:
                        WO 2003US7776 20030312 (PCT/WO US0307776)
 Application:
  Priority Application: US 2002100233 20020313
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
  EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SK
  SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE
  SI SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: H04L-009/00
International Patent Class: G06K-009/62; H04L-009/32; H04B-001/66
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 7218
English Abstract
  Digital watermarking technology is used as an image management
  system(30). Images are identified by digital watermarks (22a and 22b).
  The images are stored so as to be indexed according to their unique
  identifiers (22). In the preferred embodiment, related images are grouped
  into a set of images through a common watermark identifier (28). A
  particular image within the set of images is identified through a hash of
  the particular image (22).
French Abstract
  Cette invention concerne l'emploi de la technologie du filigrane comme
  systeme de gestion d'images (30). Des images sont identifiees a l'aide de
  filigranes numeriques (22a et 22b). Les images sont stockees de maniere a
  etre indexees en fonction de leurs identifiants uniques (22). Dans un
  mode de realisation prefere, des images apparentees sont regroupees en un
  jeu d'images a l'aide d'un identifiant a filigrane commun (28). A
  l'interieur de l'ensemble d'images, on identifie une image particuliere
  (22) au moyen de son condense numerique propre (22).
Legal Status (Type, Date, Text)
Publication 20030925 Al With international search report.
            (Item 3 from file: 349)
 3/5/12
DIALOG(R) File 349: PCT FULLTEXT
(c) 2004 WIPO/Univentio. All rts. reserv.
            **Image available**
00990398
DIGITALLY WATERMARKING CHECKS AND OTHER VALUE DOCUMENTS
CHEQUES A FILIGRANAGE NUMERIQUE ET AUTRES DOCUMENTS DE VALEUR
Patent Applicant/Assignee:
  DIGIMARC CORPORATION, 19801 S.W. 72nd Avenue, Suite 100, Tualatin, OR
    97062, US, US (Residence), US (Nationality), (For all designated states
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  ELOVITZ Andrea Nicole, 5655 Southwood Drive, Lake Oswego, OR 97035, US,
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    (Residence), US (Nationality), (Designated only for: US
Legal Representative:
  STEWART Steven W (agent), Digimarc Corporation, 19801 S.W. 72nd Avenue,
   Suite 100, Tualatin, OR 97062, US,
Patent and Priority Information (Country, Number, Date):
                        WO 200319449 A2-A3 20030306 (WO 0319449)
  Patent:
                        WO 2002US27954 20020830 (PCT/WO US0227954)
 Application:
  Priority Application: US 2001316851 20010831; US 2001327687 20011005; US
    2002352652 20020128; US 2002172769 20020614; US 2002172506 20020614
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
                                   prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
  EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI
  SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: G06F-017/60
International Patent Class: H04L-009/00; G06K-009/00; H04K-001/00
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 6711
```

## English Abstract

A digital watermark (100) comprises of various techniques for encoding hidden information in checks and other security documents. The hidden information provides an authentication tool. Also including a method for encoding a security document with information. The security document comprises a substrate (102) having printing thereon. The information is hidden in the printing and corresponds to text or numbers conveyed by at least a portion of the printing. The method includes dividing the information into a plurality of playload sets, wherein each payload set includes a sub-set of the information, and encoding the payload sets acoss the substrate (102). The plurality of payload sets is concatenated in order to retrieve the information.

## French Abstract

La presente invention concerne diverses techniques de codage d'informations cachees dans des cheques et dans d'autres documents de securite. Les informations cachees constituent un outil d'authentification. Un mode de realisation concerne un procede de codage d'un document de securite contenant des informations. Le document de securite comprend un substrat presentant une impression. Les informations sont cachees dans l'impression et correspondent au texte ou aux nombres vehicules par au moins une partie de l'impression. Ledit procede consiste a diviser les informations en une pluralite d'ensembles de donnees utiles, chaque ensemble de donnees utiles comprenant un sous-ensemble desdites informations, et a coder les ensembles de donnees utiles dans le substrat. La pluralite d'ensembles de donnees utiles est concatenee de maniere a retrouver les informations.

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Publication 20030306 A2 Without international search report and to be
                       republished upon receipt of that report.
              20030530 Late publication of international search report
Search Rpt
Republication 20030530 A3 With international search report.
              20030828 Request for preliminary examination prior to end of
                       19th month from priority date
 3/5/13
            (Item 4 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
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00960338
CONTENT IDENTIFIERS TRIGGERING CORRESPONDING RESPONSES
IDENTIFICATEURS DE CONTENU DECLENCHANT DES REPONSES CORRESPONDANTES
Patent Applicant/Assignee:
  DIGIMARC CORPORATION, 19801 SW 72nd Avenue, Suite 100, Tualatin, OR 97062
    , US, US (Residence), US (Nationality), (For all designated states
    except: US)
Patent Applicant/Inventor:
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    (Residence), US (Nationality), (Designated only for: US)
  LEVY Kenneth L, 110 NE Cedar Street, Stevenson, WA 98648, US, US
    (Residence), US (Nationality), (Designated only for: US
Legal Representative:
  CONWELL William Y (agent), Digimarc Corporation, 19801 SW 72nd Avenue,
    Suite 100, Tualatin, OR 97062, US,
Patent and Priority Information (Country, Number, Date):
  Patent:
                        WO 200293823 A1 20021121 (WO 0293823)
 Application:
                        WO 2002US15187 20020514 (PCT/WO-US0215187)
  Priority Application: US 2001858189 20010514
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
  EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
  LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ
  TM TR TT TZ UA UG US UZ VN YU ZA ZM
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: H04L-009/00
International Patent Class: H04K-001/00
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 2744
English Abstract
```

Fingerprint data derived from audio or other content is used as an identifier, to trigger machine responses corresponding to the content. The fingerprint can be derived from the content, and also separately encoded in a file header. Digital watermarks can also be similarly used.

## French Abstract

Des donnees concernant une empreinte digitale provenant d'un contenu audio ou autre sont utilisees comme identificateurs pour declencher des reponses machine correspondant au contenu. L'empreinte digitale peut provenir du contenu et etre chiffree separement dans un en-tete de fichier. Des filigranes numeriques peuvent etre utilises de facon similaire.

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Legal Status (Type, Date, Text)

Legal Status (Type, Date, Text)

Publication 20021121 A1 With international search report.

Examination 20030501 Request for preliminary examination prior to end of 19th month from priority date

(Item 5 from file: 349) DIALOG(R) File 349: PCT FULLTEXT (c) 2004 WIPO/Univentio. All rts. reserv. 00937509 \*\*Image available\*\* DIGITAL WATERMARKING AND MAPS FILIGRANAGE NUMERIQUE ET CARTES CONNEXES Patent Applicant/Assignee: DIGIMARC CORPORATION, Suite 100, 19801 SW 72nd Avenue, Tualatin, OR 97062 , US, US (Residence), US (Nationality), (For all designated states except: US) Patent Applicant/Inventor: RHOADS Geoffrey B , 2961 SW Turner Road, West Linn, OR 97068, US, US (Residence), US (Nationality), (Designated only for: US) BRUNDAGE Trent J, 16225 SW O'Neill Court, Tigard, OR 97223, US, US (Residence), US (Nationality), (Designated only for: US) LOFGREN Neil E, 163 Palos Verdes, White Salmon, WA 98672, US, US (Residence), US (Nationality), (Designated only for: US) PATTERSON Philip R, 25795 SW Meadowbrook Lane, Sherwood, OR 97140, US, US (Residence), US (Nationality), (Designated only for: US) CLEMENTS Lorie R, 8007 SE 16th Avenue, Portland, OR 97202, US, US (Residence), US (Nationality), (Designated only for: US Legal Representative: CONWELL William Y (agent), Digimarc Corporation, Suite 100, 19801 SW 72nd Avenue, Tualatin, OR 97062, US, Patent and Priority Information (Country, Number, Date): Patent: WO 200271685 A1 20020912 (WO 0271685) WO 2002US6858 20020305 (PCT/WO US0206858) Priority Application: US 2001800093 20010305; US 2001833013 20010410; US 2001284163 20010416; US 2001284776 20010418; US 2001858336 20010515; US 20012954 20011023; US 2001997400 20011128 Designated States: (Protection type is "patent" unless otherwise stated - for applications prior to 2004) AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW (EA) AM AZ BY KG KZ MD RU TJ TM Main International Patent Class: H04L-009/00 International Patent Class: H04L-015/34 Publication Language: English Filing Language: English Fulltext Availability: Detailed Description Claims Fulltext Word Count: 23726 English Abstract . . 

Digital watermarking technology herein, is described in a four step process, of (figure 4, S1-S4), and is used in conjunction with map dat, such as is acquired by satellite and other sensors and may be generated from image and ground truth databases (extract watermark location information) (figure 4, element S1). The second step, S2, determines a physical location (e.g., GPS). The third step of (figure 4, element S3), compares the location information with the physical location. The fourth step of (figure 4, S4), provides feedback of the comparison.

L'invention se rapporte a la technologie de filigranage numerique comprenant quatre etapes (figure 4, S1-S4) et utilisee avec des donnees de carte, notamment celles acquises par satellite et d'autres capteurs susceptibles d'etre generees a partir de bases de donnees d'images et de sites temoins (extraction d'informations relatives a un emplacement de filigrane) (figure 4, element S1). La deuxieme etape, S2, determine un emplacement physique (p. ex. GPS). Quant a la troisieme etape (figure 4, element S3), elle compare les informations relatives a l'emplacement et l'emplacement physique. Finalement, la quatrieme etape (figure 4, S4) assure la retroaction de la comparaison.

Legal Status (Type, Date, Text) Publication 20020912 Al With international search report. Publication 20020912 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments. 20030206 Request for preliminary examination prior to end of Examination 19th month from priority date (Item 6 from file: 349) DIALOG(R) File 349: PCT FULLTEXT (c) 2004 WIPO/Univentio. All rts. reserv. 00908018 ACCESS CONTROL SYSTEMS AND METHODS SYSTEMES ET PROCEDES DE COMMANDE D'ACCES Patent Applicant/Assignee: DIGIMARC CORPORATION, 19801 SW 72nd Avenue, Suite 100, Tulatain, OR 97062 , US, US (Residence), US (Nationality), (For all designated states except: US) Patent Applicant/Inventor: DAVIS Bruce L, 15599 Village Drive, Lake Oswego, OR 97034, US, US (Residence), US (Nationality), (Designated only for: US) RHOADS Geoffrey B , 2961 SW Turner Road, West Linn, OR 97068, US, US (Residence), US (Nationality), (Designated only for: US Legal Representative: CONWELL William Y (agent), Digimarc Corporation, 19801 SW 72nd Avenue, Suite 100, Tualatin, OR 97062, US, Patent and Priority Information (Country, Number, Date): Patent: WO 200241560 A2-A3 20020523 (WO 0241560) Application: WO 2001US50071 20011024 (PCT/WO US0150071) Priority Application: US 2000697015 20001025 Designated States: (Protection type is "patent" unless otherwise stated - for applications prior to 2004) AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW (EA) AM AZ BY KG KZ MD RU TJ TM Main International Patent Class: H04L-009/32 Publication Language: English Filing Language: English Fulltext Availability: Detailed Description

## English Abstract

Fulltext Word Count: 2927

Claims

An access control system, for buildings, networks, and equipment or the like, that is responsive to photographic badges or other tokens of identification. A visitor or user of the disclosed system can make their own badge in advance, at a location remote from the facility, network or

equipment. The badge can include a photograph of the visitor (e.g., obtained from an image database maintained by a state or federal agency, such as a state department of motor vehicles, or another trusted source), and can also include a machine-readable access code. This code, provided to the visitor or user in advance of the visit or use, can define certain privileges that the visitor or user is authorized to enjoy a the building, etc., including unescorted access to certain areas, access to certain computer resources, permission to operate equipment, etc.

## French Abstract

Cette invention concerne un systeme de commande d'acces a des batiments, reseaux, equipements et autres, qui reagit a des badges photographiques et autres marques d'identification. Tout visiteur ou utilisateur du systeme selon l'invention peut creer son propre badge a distance, en un point eloigne du batiment, du reseau ou de l'equipement. Le badge peut comporter une photographie du visiteur (tiree par exemple de la base de donnees image d'un organisme d'etat ou federal tel qu'un service des vehicules a moteur ou autre source securisee) avec eventuellement un code d'acces lisible par machine. Ce code, qui est fourni au visiteur ou a l'utilisateur avant la visite ou l'utilisation effectives, peut donner droit a certains privileges dans le batiment, etc., dont l'acces sans escorte a certaines zones ou a certaines ressources informatiques, l'autorisation d'utiliser du materiel, etc.

Legal Status (Type, Date, Text)

Publication 20020523 A2 Without international search report and to be republished upon receipt of that report.

Search Rpt 20030130 Late publication of international search report

Republication 20030130 A3 With international search report.

Examination 20030424 Request for preliminary examination prior to end of 19th month from priority date

3/5/16 (Item 7 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

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00866335 \*\*Image available\*\*

INTERACTIVE VIDEO AND WATERMARK ENABLED VIDEO OBJECTS VIDEO INTERACTIVE ET OBJETS VIDEO ACTIVES PAR FILIGRANE

Patent Applicant/Assignee:

DIGIMARC CORPORATION, 19801 SW 72nd Avenue, Suite 100, Tualatin, OR 97062, US, US (Residence), US (Nationality), (For all designated states except: US)

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MEYER Joel R (agent), Digimarc Corporation, Suite 100, 19801 SW 72nd Avenue, Tualatin, OR 97062, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200199325 A2-A3 20011227 (WO 0199325)

Application: WO 2001US19254 20010615 (PCT/WO US0119254)

Priority Application: US 2000597209 20000620; US 2000660756 20000913 Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: G06K-009/00

International Patent Class: H04K-001/00; H04N-007/00; H04N-007/167;

H04L-009/00 ; H04J-003/12
Publication Language: English
Filing Language: English
Fulltext Availability:
 Detailed Description

Claims

Fulltext Word Count: 16997

## English Abstract

Watermark in video signals or the accompanying audio track are used to associate video objects in a video sequence with object specific actions or information (604). A video object refers to a spatial and temporal portion of a video signal that depicts a recognizable object, such as a character, prop, graphic, etc. Each frame of a video signal may have one or more video objects (604). The auxiliary information is embedded in video or audio signals using "steganographic" methods, such as digital watermarks (612). By encoding object specific information into video or an accompanying audio track, the watermarks transform video objects into "watermark enabled" video objects that provide information, actions links to additional information or actions during playback of a video or audio-visual program. A similar concept may be applied to audio objects, i.e. portions of audio that are attributable to a particular speaker, character, instrument, artist, etc.

## French Abstract

L'invention concerne des filigranes dans des signaux video ou la piste audio associee, qui sont utilises pour associer des objets video dans une sequence video a des actions ou des informations specifiques a l'objet. Un objet video fait reference a la partie spatiale et temporelle d'un signal video qui represente un objet reconnaissable, tel qu'un caractere, un accessoire, un symbole graphique, etc. Chaque trame d'un signal video peut comporter un ou plusieurs objets video. Les informations auxiliaires sont integrees a des signaux video ou audio au moyen de procedes <= steganographiques >=, tels que les filigranes numeriques. Le codage d'informations specifiques a l'objet dans des signaux video ou une piste audio associee entraine la transformation par les filigranes d'objets video en objets video <= actives par filigrane >= qui fournissent des informations, des actions ou des liens a des informations ou actions additionnelles lors de la lecture d'un programme video ou audio-visuel. Un concept analogue peut etre applique a des objets audio, c'est-a-dire a des parties de donnees audio imputables a un orateur, un caractere, un instrument ou un artiste particulier, etc. Un dispositif personnel (DP) de programmation video interactive permet a des telespectateurs de connaitre un contenu interactif associe a la programmation sur un ecran personnel tout en regardant la programmation affichee sur un ecran partage. Le dispositif peut etre utilise conjointement a differents schemas video interactifs, dont par exemple, la video activee par filigrane.

Legal Status (Type, Date, Text)

Publication 20011227 A2 Without international search report and to be republished upon receipt of that report.

Examination 20020627 Request for preliminary examination prior to end of 19th month from priority date

Search Rpt 20031106 Late publication of international search report Republication 20031106 A3 With international search report.

3/5/17 (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00835857 \*\*Image available\*\*

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DIGITAL WATERMARK SCREENING AND DETECTION STRATEGIES
RECHERCHE DE FILIGRANE NUMERIQUE ET STRATEGIES DE DETECTION
Patent Applicant/Assignee:
  DIGIMARC CORPORATION, 19801 SW 72nd Avenue, Suite 250, Tualatin, OR 97062
    , US, US (Residence), US (Nationality), (For all designated states
    except: US)
                                              . .
Patent Applicant/Inventor:
   RHOADS Geoffrey B , 2961 SW Turner Road, West Linn, OR 97068, US, US
    (Residence), US (Nationality), (Designated only for: US)
   SHARMA Ravi K , 2557 NW Overlook Drive, Apartment 536, Hillsboro, OR
    97124, US, US (Residence), IN (Nationality), (Designated only for: US
Legal Representative:
  MEYER Joel R (agent), Digimarc Corporation, 19801 S.W. 72nd Avenue, Suite
    250, Tualatin, OR 97062, US,
Patent and Priority Information (Country, Number, Date):
                        WO 200169518 A1 20010920 (WO 0169518)
  Patent:
                        WO 2001US7373 20010307 (PCT/WO US0107373)
  Application:
  Priority Application: US 2000526982 20000315
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
  EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
  LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ
  TM TR TT TZ UA UG US UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: G06K-009/00
International Patent Class: G06K-009/36; H04L-009/00; H04N-007/16;
  H04N-011/00; H04N-009/64; H04K-001/00; G07D-007/00; H03M-001/22
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description
  Claims
```

## English Abstract

Fulltext Word Count: 5452

To enhance decoding of signals suspected of containing a watermark (200), a suspect signal is screened to compute detection values (204) evincing presence and strength of a watermark. Screening strategies control detector actions, such as rejecting unmarked signals (208) and improving synchronization of watermarks in suspect signals.

## French Abstract

Pour ameliorer le decodage de signaux supposes contenir un filigrane (200) un signal suspecte est filtre pour calculer des valeurs (204) de detection indiquant clairement la presence et l'intensite d'un filigrane. Des strategies de filtrage commandent des actions du detecteur telles que le rejet des signaux (208) sans filigrane et l'amelioration de la synchronisation des filigranes dans des signaux suspects.

Legal Status (Type, Date, Text)
Publication 20010920 Al With international search report.
Examination 20020516 Request for preliminary examination prior to end of 19th month from priority date

3/5/18 (Item 9 from file: 349)
DIALOG(R) File 349: PCT FULLTEXT
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00827978 \*\*Image available\*\*

WATERMARK ENCODER AND DECODER ENABLED SOFTWARE AND DEVICES
LOGICIELS ET DISPOSITIFS ACTIVES PAR DES CODEURS ET DES DECODEURS DE

# FILIGRANE Patent Applicant/Assignee: DIGIMARC CORPORATION, 19801 SW 72nd Avenue, Suite 250, Tualatin, OR 97062, US, US (Residence), US (Nationality), (For all designated states except: US) Patent Applicant/Inventor: RAMOS Daniel O, 16869 SW Hargis Road, Beaverton, OR 97007, US, US (Residence), US (Nationality), (Designated only for: US) JONES Kevin C, 4850 NW Neskowin Ave., Portland, OR 97229, US, US (Residence), US (Nationality), (Designated only for: US) RHOADS Geoffrey B, 2961 SW Turner Road, West Linn, OR 97068, US, US (Residence), US (Nationality), (Designated only for: US) Legal Representative:

MEYER Joel R (agent), Digimarc Corporation, 19801 S.W. 72nd Avenue, Suite 250, Tualatin, OR 97062, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200161508 A1 20010823 (WO 0161508)
Application: WO 2001US4812 20010214 (PCT/WO US0104812)

Priority Application: US 2000183681 20000217; US 2000191778 20000324; US 2000636102 20000810

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: G06F-013/00

International Patent Class: G06F-015/16; H04L-009/00

Publication Language: English

Filing Language: English Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 17935

English Abstract

Watermark encoders and decoders are integrated into operating systems, Internet browsers (300), media players, and other applications and devices. Such integration enables the watermark-enabled application (304) or device to provide additional functionality and information (302) available via the watermark. The watermark, for example, may link to metadata or actions related to a media object. To exploit this watermark enabled functionality, the integrated application uses a watermark decoder to access the related metadata and actions. The user interface of the integrated application is enhanced to present metadata and actions linked via the watermark. Similarly, watermark encoders may be integrated into applications to convert media objects into enhanced, watermarked objects.

## French Abstract

Les codeurs et decodeurs de filigranes sont integres dans des systemes d'exploitation, des explorateurs Internet (300), des diffuseurs de medias et autres applications et dispositifs. Une telle integration permet a l'application (304) ou au dispositif actives par filigrane d'offrir des fonctionnalites et des informations (302) supplementaires disponibles via le filigrane. Ce filigrane peut notamment constituer un lien vers des metadonnees ou des actions liees a un objet media. Afin d'exploiter cette fonctionnalite activee par filigrane, l'application integree utilise un decodeur de filigrane afin d'acceder auxdites metadonnees et actions liees. L'interface utilisateur de l'application integree est amelioree pour presenter des metadonnees et des actions liees via le filigrane. D'une facon similaire, des codeurs de filigranes peuvent etre integres a des applications afin de transformer des objets media en objets

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Legal Status (Type, Date, Text)
Publication 20010823 Al With international search report.
Publication 20010823 Al Before the expiration of the time limit for
                       amending the claims and to be republished in the
                       event of the receipt of amendments.
Examination
              20011220 Request for preliminary examination prior to end of
                       19th month from priority date
              20021031 Corrected version of Pamphlet: pages 1/13-13/13,
Correction
                       drawings, replaced by new pages 1/13-13/13; due to
                       late transmittal by the receiving Office
Republication 20021031 Al With international search report.
 3/5/19
            (Item 10 from file: 349)
DIALOG(R) File 349: PCT FULLTEXT
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00757193
            **Image available**
METHODS AND SYSTEMS FOR CONTROLLING COMPUTERS OR LINKING TO INTERNET
    RESOURCES FROM PHYSICAL AND ELECTRONIC OBJECTS
PROCEDES ET SYSTEMES DE CONTROLE D'ORDINATEURS OU DE LIAISON AUX RESSOURCES
    INTERNET D'OBJETS PHYSIQUES ET ELECTRONIQUES
Patent Applicant/Assignee:
  DIGIMARC CORPORATION, Suite 250, 19801 SW 72nd Avenue, Tualatin, OR 97062
    , US, US (Residence), US (Nationality), (For all designated states
    except: US pmbrk=pmyes)
Patent Applicant/Inventor:
   RHOADS Geoffrey B , 304 SW Tualatin Loop, West Linn, OR 97068, US, US
    (Residence), -- (Nationality), (Designated only for: US pmbrk=pmno)
  RODRIGUEZ Tony F, 3104 NE 31st Avenue, Portland, OR 97212, US, US
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Legal Representative:
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Patent and Priority Information (Country, Number, Date):
                        WO 200070585 A1 20001123 (WO 0070585)
  Patent:
                                                (PCT/WO US0013333)
                        WO 2000US13333 20000515
  Application:
  Priority Application: US 99314648 19990519; US 99342688 19990629; US
    99342689 19990629; US 99342971 19990629; US 99343101 19990629; US
    99343104 19990629; US 99141468 19990629; US 99151586 19990830; US
    99158015 19991006; US 99163332 19991103; US 99164619 19991110; US
    2000531076 20000318; US 2000543125 20000405; US 2000547664 20000412; US
    2000552998 20000419
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE
  GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK
  MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN
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YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW SD SL SZ TZ UG ZW.

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: G09C-005/00

International Patent Class: G06F-017/00; G06K-007/00; G06K-009/00;

G06K-009/36; G06K-019/06; H04L-009/00

Publication Language: English

Filing Language: English Fulltext Availability:
Detailed Description

Claims

Fulltext Word Count: 54735

## English Abstract

Physical or electronic objects are encoded with identifiers, which serve to trigger object-appropriate responses from computer systems that encounter such objects. The encoding may be steganographic (e.g., by digital watermarks), so the presence of such identifiers is not evident to persons encountering the objects. An exemplary application is a computer system that looks at a printed magazine advertisement (20) and initiates a link to a corresponding internet page. In one such implementation, the computer system senses an identifier encoded in the advertisement, forwards the identifier to a remote database, receives from the database (17) a corresponding internet address (18a, 18b, 18c), and directs a browser to that address (18a, 18b, 18c). The same arrangement can be used for on-line ordering from printed merchandise catalogs. Another application is a computer system that looks at a printed spreadsheet (20), and retrieves from disk storage an electonic version of the same document for editing.

## French Abstract

Des objets physiques ou electroniques sont codes avec des identifiants, qui servent a declencher des reactions appropriees aux objets a partir de systemes informatiques qui retrouvent ces objets. Le codage peut etre effectue en steganographie (par exemple, en filigrane numerique), de sorte que la presence desdits identifiants ne soient pas evidents aux personnes rencontrant de tels objets. Une utilisation a titre d'exemple serait un systeme informatique qui regarde une annonce-magazine imprimee (20) et declenche une liaison vers une page correspondante sur l'Internet. Dans une telle mise en oeuvre, le systeme informatique capte un identifiant code dans l'annonce publicitaire, achemine l'identifiant vers une base de donnees distante, recoit a partir de la base de donnees (17) une adresse Internet correspondante (18a, 18b, 18c), et dirige un navigateur de reseau vers ladite adresse (18a, 18b, 18c). Un arrangement identique peut etre utilise pour la commande en ligne a partir d'imprimes catalogues d'articles. Une autre application serait un systeme informatique qui regarde un tableur imprime (20), et preleve de la memoire a disques magnetiques une version electronique de ce meme document pour l'edition.

Legal Status (Type, Date, Text)

Publication 20001123 A1 With international search report.

Publication 20001123 A1 Before the expiration of the time limit for amending the claims and to be republished in the

event of the receipt of amendments.

Examination 20010816 Request for preliminary examination prior to end of 19th month from priority date

3/5/20 (Item 11 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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## SYSTEME DE DISSUASION RELATIF AUX CONTREFACONS Patent Applicant/Assignee: DIGIMARC CORPORATION, RHOADS Geoffrey B, DAVIS Bruce L, CARR J Scott, Inventor(s): RHOADS Geoffrey B , DAVIS Bruce L, CARR J Scott Patent and Priority Information (Country, Number, Date): WO 200036785 A1 20000622 (WO 0036785) Patent: WO 99US30217 19991216 (PCT/WO US9930217) Application: Priority Application: US 98112955 19981218 Designated States: (Protection type is "patent" unless otherwise stated - for applications prior to 2004) AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG Main International Patent Class: H04L-009/00 International Patent Class: H04L-009/32; C09D-011/00 Publication Language: English Fulltext Availability: Detailed Description Claims Fulltext Word Count: 4404

## English Abstract

Processing of banknote- or other security document-images in a computer system is sensed, and serves to launch (or direct) a web browser to a web site that educates the user about limitations on use of such imagery, and/or provides substitute imagery that may be utilized for legitimate purposes. Such images may be recognized by a digital watermark encoded therein or by other known techniques. The technology is applicable to a wide class of documents that should not be duplicated, including passports, visas, postal stamps, stock certificates, travelers checks, concert/event tickets, lottery tickets, etc. The technology may also be used for non-security applications, e.g., recognizing images, video, or audio being processed on a user's computer as belonging to a certain class, and presenting the user with a web page relating to that class of object. Commerce opportunities may thereby be made available to the

## French Abstract

Le traitement d'images de billets de banque ou d'autres documents de securite dans un systeme informatique est detecte et sert a lancer (ou diriger) un explorateur Web vers un site Web qui instruit l'utilisateur quant aux limitations portant sur l'utilisation de telles images, et/ou propose des images de substitution qui peuvent etre utilisees a des fins legitimes. De telles images peuvent etre reconnues par un filigrane numerique code dans ces images ou par d'autres techniques connues. Cette technologie est applicable a une grande diversite de documents qui ne doivent pas etre dupliques, y compris les passeports, les visas, les timbres postaux, les certificats d'actions, les cheques de voyage, les tickets de concert/evenement, les tickets de loterie et autres. Cette technologie peut egalement etre utilisee pour des applications dans un cadre non securitaire, telles que la reconnaissance d'images, dans ce cas, des signaux video ou audio sont traites sur un ordinateur d'utilisateur comme appartenant a une certaine classe, et l'utilisateur se voit presenter une page Web relative a cette classe d'objet. Des offres commerciales peuvent ainsi etre proposees a l'utilisateur.

(Item 1 from file: 350) DIALOG(R) File 350: Derwent WPIX (c) 2004 Thomson Derwent. All rts. reserv. \*\*Image available\*\* 016329864 WPI Acc No: 2004-487761/200446 XRPX Acc No: N04-384821 Printed object e.g. security document image analyzing method, involves determining whether machine readable auxiliary signal is embedded in image using print structure that changes in response to copy operation Patent Assignee: DIGIMARC CORP (DIGI-N) Inventor: ALATTAR O M; BRUNK H L; HANNIGAN B T; LEVY K L; REED A M; RODRIGUEZ T F; SHARMA R K Number of Countries: 101 Number of Patents: 001 Patent Family: Patent No Kind Date Applicat No Kind Date Week WO 200451917 A1 20040617 WO 2003US37802 A 20031126 200446 B Priority Applications (No Type Date): US 2003523159 P 20031117; US 2002430014 P 20021128; US 2003440593 P 20030115; US 2003466926 P 20030430 ; US 2003475389 P 20030602 Patent Details: The second secon Patent No Kind Lan Pg Main IPC Filing Notes WO 200451917 A1 E 93 H04L-009/00 Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW Abstract (Basic): WO 200451917 A1 NOVELTY - The method involves determining whether a machine readable auxiliary signal is embedded at embedding locations in an image using a print structure that changes in response to a copy operation. The change causes a divergence or convergence of a characteristic of the structure such that the signal becomes more or less detectable. The signal is evaluated to determine whether a printed object is a copy or an original. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: . . (a) a storage medium with instructions for performing a printed object image analyzing method (b) a method for creating an image to be printed on a printed object (c) a storage medium has stored information for performing a method of creating an image to be printed on a printed object (d) a printed object. USE - Used for analyzing an image of a printed object e.g. security document, identity document, banknote, check and package. ADVANTAGE - The machine readable auxiliary signal embedded at embedding locations in the image is determined using print structure, thereby providing more effective discrimination metrics between originals and counterfeits. DESCRIPTION OF DRAWING(S) - The drawing shows a process for generating an auxiliary data signal for printing on print media for authentication.

pp; 93 DwgNo 1/36
Title Terms: PRINT; OBJECT; SECURE; DOCUMENT; IMAGE; METHOD; DETERMINE;
MACHINE; READ; AUXILIARY; SIGNAL; EMBED; IMAGE; PRINT; STRUCTURE; CHANGE;
RESPOND; COPY; OPERATE
Derwent Class: S06; T01; T04; T05
International Patent Class (Main): H04L-009/00

International Patent Class (Additional): G06F-011/30

File Segment: EPI

(Item 2 from file: 350) DIALOG(R) File 350: Derwent WPIX (c) 2004 Thomson Derwent. All rts. reserv. \*\*Image available\*\* 016109919 WPI Acc No: 2004-267795/200425 Related WPI Acc No: 2004-069726 XRPX Acc No: N04-211751 Identification document creating method for drivers license, involves embedding digital watermark signal where signal carries variable message payload with information related to other information on identification document Patent Assignee: ALATTAR A M (ALAT-I); BARR J K (BARR-I); BRADLEY B A (BRAD-I); DURST R (DURS-I); HANNIGAN B T (HANN-I) Inventor: ALATTAR A M ; BARR J K; BRADLEY B A; DURST R; HANNIGAN B T Number of Countries: 001 Number of Patents: 001 Patent Family: Kind Week Patent No Kind Date Applicat No Date US 20040039914 A1 20040226 US 2002158385 20020529 200425 B A US 2003449827 A 20030529 Priority Applications (No Type Date): US 2003449827 A 20030529; US 2002158385 A 20020529 Patent Details: Patent No Kind Lan Pg Main IPC Filing Notes US 20040039914 A1 16 H04L-009/00 CIP of application US 2002158385 Abstract (Basic): US 20040039914 A1 NOVELTY - The method involves identifying a feature location in a biometric image. A digital watermark signal is generated. The digital watermark signal is embedded in the biometric image such that the digital watermark location is dependent on the feature of location. The digital watermark signal carries a variable message payload (104) with information related to other information on an identification document. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (a) a tangible medium with instructions for performing a method for creating Identification document (b) a method of performing biometric analysis (c) a method of authenticating an identification document. USE - Used for creating an identification document in drivers license, access control card, voter registration card, travel document and badge. ADVANTAGE - The information provided in digital watermark code provides information that increases speed of search and accuracy of search. The method enables accurate template extraction and comparison. DESCRIPTION OF DRAWING(S) - The drawing shows a diagram depicting a digital watermark embedder used to create watermarked objects that are authenticated in multiple ways. Hash function (103) Payload message (104) Basic pattern (106) Digital watermark embedding operations (109, 110) Distortion channel (114) pp; 16 DwgNo 1/4 Title Terms: IDENTIFY; DOCUMENT; METHOD; DRIVE; LICENCE; EMBED; DIGITAL; WATERMARK; SIGNAL; SIGNAL; CARRY; VARIABLE; MESSAGE; PAYLOAD; INFORMATION ; RELATED; INFORMATION; IDENTIFY; DOCUMENT Derwent Class: S05; T01 International Patent Class (Main): H04L-009/00. International Patent Class (Additional): H04L-009/32 File Segment: EPI

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DIALOG(R) File 350: Derwent WPIX
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            **Image available**
015911886
WPI Acc No: 2004-069726/200407
Related WPI Acc No: 2004-267795
XRPX Acc No: NO4-056080
  Authentication media object creation method e.g. for document, involves
  embedding content dependent pattern obtained by combining content
  signature and pattern generated from object hash information, into object
Patent Assignee: DIGIMARC CORP (DIGI-N); BARR J K (BARR-I); BRADLEY B A
  (BRAD-I); HANNIGAN B T (HANN-I)
Inventor: ALATTAR A M ; BARR J K; BRADLEY B A; DURST R; HANNIGAN B T
Number of Countries: 100 Number of Patents: 003
Patent Family:
Patent No
                             Applicat No
             Kind
                     Date
                                            Kind
                                                   Date
                                                            Week
US 20030223584 A1 20031204 US 2002158385 A
                                                  20020529
                                                           200407 B
WO 2003103211 A2 20031211 WO 2003US17048 A
                                                 20030529 200407
AU 2003273528 A1 20031219 AU 2003273528
                                            Α
                                                 20030529 200449
Priority Applications (No Type Date): US 2002158385 A 20020529
Patent Details:
Patent No Kind Lan Pg
                       Main IPC
                                     Filing Notes
                      8 H04L-009/00
US 20030223584 A1
WO 2003103211 A2 E
                      H04L-000/00
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
   CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
   IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
   OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA
   ZM ZW
   Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB
   GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ
   UG ZM ZW
AU 2003273528 A1
                       H04L-009/00
                                     Based on patent WO 2003103211
Abstract (Basic): US 20030223584 A1
        NOVELTY - A pattern is generated from the computed hash information
    on the media object such as document, software for authentication. The
    content signature computed from a media signal in the media object, is
    combined with the generated pattern to form a content dependent pattern
    that is embedded as a digital watermark into the media object.
        USE - For creating media objects such as document, software,
    multi-dimensional graphics models, surface textures of objects, images,
    video, audio, for authentication using digital water marking embedder.
        ADVANTAGE - By using the simple and reliable method, computed
    content dependent pattern is embedded as digital watermark onto media
    object, thereby authentication of object is enabled effectively and
    securely.
        DESCRIPTION OF DRAWING(S) - The figure shows the flow diagram
    explaining the authentication media object creation process.
        pp; 8 DwgNo 2/2
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Title Terms: AUTHENTICITY; MEDIUM; OBJECT; CREATION; METHOD; DOCUMENT; EMBED; CONTENT; DEPEND; PATTERN; OBTAIN; COMBINATION; CONTENT; SIGNATURE; PATTERN; GENERATE; OBJECT; HASH; INFORMATION; OBJECT

Derwent Class: T01; T03; W04

International Patent Class (Main): H04L-000/00; H04L-009/00

File Segment: EPI

3/5/24 (Item 4 from file: 350) DIALOG(R) File 350: Derwent WPIX (c) 2004 Thomson Derwent. All rts. reserv.

\*\*Image available\*\* 015769587 WPI Acc No: 2003-831789/200377 XRPX Acc No: N03-664744

Data transaction method for credit card, involves sending parameters to

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integrated small computer system interface machine for allowing client
  system to transact data over secure connection
Patent Assignee: INT BUSINESS MACHINES CORP (IBMC )
Inventor: ALLEN J P; CONKLIN W C; JAIN V; MULLEN S P; SHARMA R ; SHARMA S
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No
            Kind
                   Date
                             Applicat No
                                            Kind
                                                   Date
US 20030191932 A1 20031009 US 2002116523 A
                                                  20020404
                                                            200377 B
Priority Applications (No Type Date): US 2002116523 A 20020404
Patent Details:
Patent No Kind Lan Pg
                       Main IPC
                                     Filing Notes
US 20030191932 A1 11 H04L-009/00
                                            . . . .
                                                   . . . .
Abstract (Basic): US 20030191932 Al
       NOVELTY - A request for secure connection to transact data received
    from a client system, is forwarded to a computer system for negotiating
    parameters such as encryption/decryption key for secure connection. The
    parameters are sent to small computer system interface (SCSI) machine
    for allowing the client system to transact data over secure connection.
        DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
    following:
        (1) computer program product for data transaction method;
        (2) data transaction apparatus; and
        (3) computer system.
        USE - For data transaction used in computer system (claimed) of
    credit card company and financial institutions.
        ADVANTAGE - Provides security to small computer system interface
    (SCSI) data transaction by sending parameter to SCSI system after
    computer system has negotiated the parameters.
        DESCRIPTION OF DRAWING(S) - The figure shows a flowchart
    illustrating data transaction method.
        pp; 11 DwgNo 6/6
Title Terms: DATA; TRANSACTION; METHOD; CREDIT; CARD; SEND; PARAMETER;
  INTEGRATE; COMPUTER; SYSTEM; INTERFACE; MACHINE; ALLOW; CLIENT; SYSTEM;
  DATA; SECURE; CONNECT
Derwent Class: T01
International Patent Class (Main): H04L-009/00
File Segment: EPI
            (Item 5 from file: 350)
 3/5/25
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
            **Image available**
015738760
WPI Acc No: 2003-800961/200375
Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
  1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122;
  2000-194736; 2000-195398; 2000-365779; 2000-490584; 2000-647035;
  2001-022904; 2001-335855; 2001-357503; 2001-374044; 2001-397673;
  2001-425330; 2001-570080; 2001-580828; 2001-581298; 2001-581665;
  2001-595705; 2001-607222; 2002-011177; 2002-041658; 2002-062159;
  2002-082807; 2002-154357; 2002-163652; 2002-163681; 2002-179003; ....
  2002-188040; 2002-205513; 2002-224088; 2002-226224; 2002-235400;
  2002-236852; 2002-238406; 2002-238913; 2002-239839; 2002-254659;
  2002-256143; 2002-268672; 2002-315095; 2002-361599; 2002-361694;
  2002-370756; 2002-382444; 2002-391512; 2002-392708; 2002-394013;
  2002-403568; 2002-405083; 2002-413035; 2002-435593; 2002-470507;
  2002-479804; 2002-498079; 2002-498923; 2002-507125; 2002-508021;
  2002-528580; 2002-556177; 2002-598690; 2002-598923; 2002-617280;
  2002-636862; 2002-642228; 2002-654787; 2002-672857; 2002-673567;
  2002-691185; 2002-697772; 2002-698265; 2003-045908; 2003-057552;
  2003-074123; 2003-090293; 2003-091652; 2003-137905; 2003-140183;
  2003-174573; 2003-199024; 2003-219596; 2003-238411; 2003-266622;
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2003-362315; 2003-391983; 2003-392393; 2003-401297; 2003-418353;
 2003-418436; 2003-419661; 2003-419904; 2003-465734; 2003-492022;
 2003-557490; 2003-587433; 2003-597620; 2003-615418; 2003-615425;
 2003-655604; 2003-655616; 2003-655715; 2003-656012; 2003-658647;
 2003-659691; 2003-687554; 2003-707329; 2003-730410; 2003-767701;
 2003-777048; 2003-800216; 2003-802603; 2003-829683; 2003-897231;
 2004-031964; 2004-059015; 2004-059948; 2004-070353; 2004-098221;
 2004-119479; 2004-155399; 2004-179244; 2004-179245; 2004-303569;
 2004-386915
XRPX Acc No: N03-641855
 Media content management method using Internet, involves finding related
 metadata on receiving request along with watermark information and
 sending related metadata to reader device
Patent Assignee: AGGSON C K (AGGS-I); HIATT R S (HIAT-I); JONES K C
  (JONE-I); LEVY K L (LEVY-I); MOSHER B (MOSH-I); RHOADS G B (RHOA-I);
 RODRIGUEZ T F (RODR-I)
Inventor: AGGSON C K; HIATT R S; JONES K C; LEVY K L; MOSHER B; RHOADS G B
  ; RODRIGUEZ T F
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No
             Kind
                    Date
                            Applicat No
                                           Kind
                                                  Date
                                                           Week
US 20020188841 A1 20021212 US 95508083
                                                 19950727
                                                           200375 B
                                            Α
                            US 96649419
                                            Α
                                                19960516
                            US 96746613
                                            Α
                                                19961112
                                            Α
                            US 2000612177
                                                20000706
                            US 2001282205
                                           P
                                                20010406
                            US 2002118468
                                           Α
                                               20020405
Priority Applications (No Type Date): US 2001282205 P 20010406; US 95508083
 A 19950727; US 96649419 A 19960516; US 96746613 A 19961112; US 2000612177
```

A 20000706; US 2002118468 A 20020405

Patent Details:

Patent No Kind Lan Pg Main IPC US 20020188841 A1 12 H04L-009/00

Filing Notes CIP of application US 95508083 CIP of application US 96649419 Cont of application US 96746613 CIP of application US 2000612177 Provisional application US 2001282205 CIP of patent US 5841978 CIP of patent US 5862260

Cont of patent US 6122403

Abstract (Basic): US 20020188841 A1

NOVELTY - A reader device reads a watermark embedded in a media content and forwards the watermark information to a router, to find a metadata database. A metadata database identifier finds a related metadata for the media content using the watermark information and sends the related metadata to the reader device.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- media package;
- (2) content searching system;
- (3) metadata formatting method; and
- (4) a method of controlling unauthorized distribution of content media.

USE - For asset management of media content such as still image, audio, video information, software, multidimensional graphic models, surface texture of object by providing watermark to packages such as video cassette tape, digital versatile disk (DVD), compact disk (CD), paper, label, covering, packaging, plastic and jewel care, also for managing media content is web site when client access it through network device such as personal computer, set top box, network enabled audio or video player, personal digital assistant, smart phones, interactive television system (ITV) using Internet.

ADVANTAGE - Media content management is enhanced by linking media content with metadata.

DESCRIPTION OF DRAWING(S) - The figure shows a system for enhancing

```
digital asset management.
       content database (102)
       network (104)
       router application (112)
       router system (114)
       metadata database management system (116)
       pp; 12 DwgNo 1/3
Title Terms: MEDIUM; CONTENT; MANAGEMENT; METHOD; FINDER; RELATED; RECEIVE;
  REQUEST; WATERMARK; INFORMATION; SEND; RELATED; READ; DEVICE
Derwent Class: T01; T03; W04
International Patent Class (Main): H04L-009/00
International Patent Class (Additional): G06F-017/60
File Segment: EPI
            (Item 6 from file: 350)
3/5/26
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
015705508
             **Image available**
WPI Acc No: 2003-767701/200372
Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
  1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122;
  2000-194736; 2000-195398; 2000-365779; 2000-464989; 2000-490584;
 2000-647035; 2001-022904; 2001-335855; 2001-357503; 2001-374044;
 2001-397673; 2001-425330; 2001-570080; 2001-580828; 2001-581298;
 2001-581665; 2001-595705; 2001-607222; 2002-011177; 2002-041658;
 2002-062159; 2002-082807; 2002-154357; 2002-163681; 2002-179003;
 2002-188040; 2002-205513; 2002-224088; 2002-226224; 2002-235400;
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 2002-268672; 2002-315095; 2002-361599; 2002-361694; 2002-370756;
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 2002-470507; 2002-479804; 2002-498079; 2002-498923; 2002-507125;
 2002-508021; 2002-528580; 2002-556177; 2002-590019; 2002-598923;
 2002-636862; 2002-642228; 2002-654787; 2002-672857; 2002-673567;
 2002-691185; 2002-697772; 2003-045908; 2003-074123; 2003-075114;
 2003-090293; 2003-137905; 2003-140183; 2003-174573; 2003-199024;
 2003-238411; 2003-266622; 2003-268467; 2003-275465; 2003-327510;
 2003-331365; 2003-353776; 2003-362315; 2003-391983; 2003-392393;
 2003-401297; 2003-418353; 2003-418436; 2003-419904; 2003-465734;
 2003-492022; 2003-557490; 2003-587433; 2003-597620; 2003-615418;
 2003-615425; 2003-655604; 2003-655616; 2003-655715; 2003-656012;
  2003-658647; 2003-659691; 2003-687554; 2003-696414; 2003-707329;
  2003-730410; 2003-777048; 2003-800216; 2003-800961; 2003-802603;
  2003-829683; 2003-897231; 2004-031964; 2004-041644; 2004-059015;
  2004-059948; 2004-070353; 2004-098221; 2004-119479; 2004-155399;
 2004-179244; 2004-179245; 2004-303569; 2004-386915
XRPX Acc No: N03-614937
  Image managing method for aerial imagery, involves providing hash for
  image where image is digitally watermarked with unique identifiers in
 database and uniquely identified with hash of image produced by hashing
  algorithm
Patent Assignee: DIGIMARC CORP (DIGI-N)
                                            . . . .
                                                   Inventor: LOFGREN N E; RHOADS G B
Number of Countries: 100 Number of Patents: 003
Patent Family:
Patent No
             Kind
                            Applicat No
                                                  Date
                                                           Week
                    Date
                                           Kind
                                                20030312 200372 B
WO 200379606 A1 20030925
                            WO 2003US7776
                                           Α
US 6664976
              B2
                            US 2001284776
                                           P
                                                20010418
                                                          200406
                  20031216
                             US 2001858336
                                           Α
                                               20010515
                             US 2002100233
                                            Α
                                                20020313
AU 2003220245 A1 20030929 AU 2003220245
                                            Α
                                                20030312
                                                          200437
Priority Applications (No Type Date): US 2002100233 A 20020313; US
  2001284776 P 20010418; US 2001858336 A 20010515
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Patent Details:

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Filing Notes
Patent No Kind Lan Pg
                        Main IPC
WO 200379606 A1 E 36 H04L-009/00
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
   CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
   IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
   OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA
   Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB
   GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ
   UG ZM ZW
US 6664976
                        G09G-005/00
                                      Provisional application US 2001284776
              В2
                                      CIP of application US 2001858336
AU 2003220245 A1
                       H04L-009/00
                                      Based on patent WO 200379606
Abstract (Basic): WO 200379606 Al
        NOVELTY - The method involves providing a hash for an image (20)
    where the image includes a digital watermark with a unique identifier
    (22). The images are stored and indexed according to the identifiers in
    a database. The hash is an algorithm that converts a signal into a
    lower number of bits and the algorithm are applied to the image to form
    the hash. The image in the database is uniquely identified with the
    hash of the image.
        USE - Used for managing images in aerial imagery, photography and
    digital imaging fields.
        ADVANTAGE - The watermarks can be applied to any data, thereby
    facilitating its use in forensic tracking purposes. The use of
    identifiers helps in identifying various data with different
    identifiers and hence providing a secure watermarking process that
    cannot be replicated by unauthorized individuals.
        DESCRIPTION OF DRAWING(S) - The drawing shows an associated related
    images and information with a digital watermark identifier.
        Image (20)
        Unique identifiers (22)
        Digital watermarks (22a, 22b)
        Watermark identifier (28)
        Image management system (30)
        pp; 36 DwgNo 3/8
Title Terms: IMAGE; MANAGE; METHOD; AERIAL; HASH; IMAGE; IMAGE; DIGITAL;
  WATERMARK; UNIQUE; IDENTIFY; DATABASE; UNIQUE; IDENTIFY; HASH; IMAGE;
  PRODUCE; HASH; ALGORITHM
Derwent Class: P85; S02; T01; T04; W02; W04
International Patent Class (Main): G09G-005/00; H04L-009/00
International Patent Class (Additional): G06K-009/00; G06K-009/62;
 H04B-001/66; H04L-009/32
File Segment: EPI; EngPI
 3/5/27
            (Item 7 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
             **Image available**
015525283
WPI Acc No: 2003-587433/200355
Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
  1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122;
  2000-194736; 2000-195398; 2000-365779; 2000-464989; 2000-490584;
 2000-647035; 2001-022904; 2001-335855; 2001-357503; 2001-374044; 2001-397673; 2001-425330; 2001-570080; 2001-580828; 2001-581298;
 2001-581665; 2001-595705; 2001-607222; 2002-011177; 2002-041658; 2002-062159; 2002-082807; 2002-154357; 2002-163652; 2002-163681;
  2002-179003; 2002-188040; 2002-205513; 2002-224088; 2002-226224;
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  2002-254659; 2002-256143; 2002-268672; 2002-315095; 2002-361599;
  2002-361694; 2002-370756; 2002-382444; 2002-391512; 2002-392708;
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  2002-416925; 2002-435593; 2002-470507; 2002-479804; 2002-498079;
  2002-498923; 2002-507125; 2002-508021; 2002-528580; 2002-556177;
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2002-598690; 2002-598923; 2002-617280; 2002-636862; 2002-642228;
  2002-654787; 2002-672857; 2002-673567; 2002-691185; 2002-697772;
  2003-045908; 2003-057552; 2003-074123; 2003-090293; 2003-091652;
  2003-137905; 2003-140183; 2003-174573; 2003-199024; 2003-219596;
  2003-238411; 2003-266622; 2003-268467; 2003-275465; 2003-327510;
  2003-331365; 2003-353776; 2003-362315; 2003-391983; 2003-392393;
  2003-401297; 2003-418353; 2003-418436; 2003-419661; 2003-419904;
  2003-465734; 2003-492022; 2003-557490; 2003-597620; 2003-615418;
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  2003-658647; 2003-659691; 2003-687554; 2003-707329; 2003-730410;
  2003-767701; 2003-777048; 2003-800216; 2003-800961; 2003-802603;
  2003-829683; 2003-897231; 2004-031964; 2004-041644; 2004-059015;
  2004-059948; 2004-070353; 2004-098221; 2004-119479; 2004-155399;
  2004-179244; 2004-179245; 2004-303569; 2004-386915
XRPX Acc No: N03-467792
  Method of detecting digital watermark in compressed data stream by
  performing calibration of one dimensional signal with one dimensional
  calibration signal to compensate for geometric distortion of video signal
Patent Assignee: DIGIMARC CORP (DIGI-N); CELIK M U (CELI-I)
Inventor: ALATTAR A M ; ELLINGSON E E; LEVY K L; RHOADS G B ; STAGER R R;
  CELIK M U
Number of Countries: 100 Number of Patents: 003
Patent Family:
Patent No
                     Date
                             Applicat No
                                                   Date
                                                            Week
             Kind
                                            Kind
             A2 20030731 WO 2003US1975
                                            A 20030122
                                                           200355 B ··
WO 200362960
US 20040034778 Al 20040219
                                            Ρ
                             US 2002404038
                                                  20020815 200415
                             US 2002300921
                                                 20021119
                                            Α
AU 2003210625 A1
                  20030902 AU 2003210625
                                            Α
                                                 20030122 200426
Priority Applications (No Type Date): US 2002428485 P 20021121; US
  2002351565 P 20020122; US 2002404038 P 20020815; US 2002300921 A 20021119
Patent Details:
Patent No Kind Lan Pq
                        Main IPC
                                     Filing Notes
WO 200362960 A2 E 53 G06F-000/00
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
   CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
   IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
   OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA
   Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB
   GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG
   ZM ZW
US 20040034778 A1
                        H04L-009/00
                                      Provisional application US 2002404038
AU 2003210625 A1
                       G06F-000/00 Based on patent WO 200362960 ...
Abstract (Basic): WO 200362960 A2
        NOVELTY - The method involves transforming video data into
    one-dimensional video signal. A calibration of the signal is performed
    with a one dimensional calibration signal to compensate for geometric
    distortion of the video signal. The transforming includes combining
    rows within a video frame into a first one-dimensional signal and
    involves combining columns within a video frame into a second
    one-dimensional signal.
        DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:
        (a) a tangible medium on which are stored instructions for
    performing the claimed method
        (b) a method for detecting content flags embedded in host media
    signal
        (c) a method for video watermarking
        (d) a method of embedding auxiliary data in a compressed data
        (e) a method of extracting auxiliary data from a compressed data
```

(f) a method for detecting auxiliary data in a compressed data

USE - In digital watermarking and fingerprinting for modifying

age care and showing

stream

stream

physical or electronic media to embed a hidden machine-readable code into the media. The embedded code is imperceptible or nearly imperceptible to the user, yet may be detected through an automated detection process applied to media signals such as images, audio signals, and video signals. It may also be applied to other types of media objects, including documents (e.g., through line, word or character shifting), software, multi-dimensional graphics models, and surface textures of objects.

ADVANTAGE - Allows for several exact copies of video output source with differing payloads.

DESCRIPTION OF DRAWING(S) - The drawing is a flow diagram illustrating a method for detecting one-dimensional calibration signal in a host signal and using them to compute geometric distortion.

pp; 53 DwgNo 1/7

Title Terms: METHOD; DETECT; DIGITAL; WATERMARK; COMPRESS; DATA; STREAM; PERFORMANCE; CALIBRATE; ONE; DIMENSION; SIGNAL; ONE; DIMENSION; CALIBRATE; SIGNAL; COMPENSATE; GEOMETRY; DISTORT; VIDEO; SIGNAL

Derwent Class: T01; W02; W04

International Patent Class (Main): G06F-000/00; H04L-009/00

File Segment: EPI

## 3/5/28 (Item 8 from file: 350) DIALOG(R) File 350: Derwent WPIX. (c) 2004 Thomson Derwent. All rts. reserv.

015497082 \*\*Image available\*\* WPI Acc No: 2003-559229/200352

XRPX Acc No: N03-444554

Reversible watermarking for embedding auxiliary data into image, video or other data that are fully recoverable using inverse transform

Patent Assignee: DIGIMARC CORP (DIGI-N); DECKER S K (DECK-I); TIAN J (TIAN-I); LOFGREN N E (LOFG-I); STACH J (STAC-I); ALATTAR A M (ALAT-I) Inventor: DECKER S K; TIAN J; LOFGREN N E; STACH J; ALATTAR A M

Number of Countries: 100 Number of Patents: 006

Patent Family:

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Week
Patent No
                   Date
                          Applicat No
                                        Kind
                                              Date
            Kind
WO 200355130 A1 20030703 WO 2002US40162 A
                                             20021212 200352 B
                                             20011213 200358
US 20030149879 A1 20030807
                           US 2001340651
                                         P
                          US 2002404181 P
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US 20030179900 A1
                  20030925
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                                             20011213 200364
                                         P
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                                             20021213
US 20030179901 A1 20030925 US 2001340651
                                         P. . 20011213 200364 ...
                          US 2002319413 A
                                             20021213
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US 20040044893 A1 20040304 US 2001340651 P 20011213 200417

US 2002404181 P 20020816 US 2002430511 P 20021202 US 2002319404 A 20021212 US 2003435517 A 20030508

AU 2002357259 A1 20030709 AU 2002357259 A 20021212 200428

Priority Applications (No Type Date): US 2002430511 P 20021202; US 2001340651 P 20011213; US 2002404181 P 20020816; US 2002319404 A 20021212; US 2002319380 A 20021213; US 2002319413 A 20021213; US 2003435517 A 20030508

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes WO 200355130 A1 E 43 H04L-009/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM

ZW

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H04L-009/00
                                       Provisional application US 2001340651
US 20030149879 A1
                                      Provisional application US 2002404181
                        G06K-009/00
                                       Provisional application US 2001340651
US 20030179900 A1
US 20030179901 A1
                        G06K-009/00
                                       Provisional application US 2001340651
                        H04L-009/00
                                      Provisional application US 2001340651
US 20040044893 A1
                                      Provisional application US 2002404181
                                      Provisional application US 2002430511
                                      CIP of application US 2002319404
                                      Based on patent WO 200355130
AU 2002357259 A1
                       H04L-009/00
Abstract (Basic): WO 200355130 Al
        NOVELTY - An optional transform is applied, 111, to an original
    image to produce a transformed image, 112 and certain elements in the
    transformed image are identified, 113, that have a property that
    remains identifiable after they are changed by auxiliary data
    embedding. An auxiliary data stream is embedded in this image that is
    embedded in elements of the image, 115, to create a new image, 116, and inverse transform can be applied, 117, to generate the image with
    auxiliary embedded data, 118.
        DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for a method
    of rendering embedded auxiliary data, for a method of decoding
    auxiliary data and for a storage medium.
        USE - Embedding reversible auxiliary data in image data.
        DESCRIPTION OF DRAWING(S) - The drawing shows the method.
        pp; 43 DwgNo 1E/4
Title Terms: REVERSE; WATERMARK; EMBED; AUXILIARY; DATA; IMAGE; VIDEO; DATA
  ; RECOVER; INVERSE; TRANSFORM
Derwent Class: T01; W04
International Patent Class (Main): G06K-009/00; H04L-009/00
International Patent Class (Additional): H04N-007/167
File Segment: EPI
            (Item 9 from file: 350)
 3/5/29
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
015358966
             **Image available**
WPI Acc No: 2003-419904/200339
Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
  1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122;
  2000-194736; 2000-195398; 2000-365779; 2000-464989; 2000-490584;
  2001-022904; 2001-335855; 2001-357503; 2001-374044; 2001-397673;
  2001-425330; 2001-570080; 2001-580828; 2001-581298; 2001-581665;
  2001-595705; 2001-607222; 2002-011177; 2002-041658; 2002-062159;
  2002-082807; 2002-154357; 2002-163681; 2002-179003; 2002-188040;
  2002-205513; 2002-224088; 2002-226224; 2002-235400; 2002-236852;
  2002-238913; 2002-254659; 2002-256143; 2002-268672; 2002-361599;
  2002-370756; 2002-382444; 2002-391512; 2002-392708; 2002-403568;
  2002-405083; 2002-413035; 2002-435593; 2002-470507; 2002-479804;
  2002-498079; 2002-498923; 2002-507125; 2002-508021; 2002-556177;
  2002-590019; 2002-598923; 2002-636862; 2002-642228; 2002-654787;
  2002-672857; 2002-673567; 2002-681419; 2002-691185; 2002-697772;
  2002-698265; 2002-750104; 2003-045908; 2003-074123; 2003-090293;
  2003-137905; 2003-174573; 2003-199024; 2003-238411; 2003-266622;
  2003-268467; 2003-275465; 2003-327510; 2003-331365; 2003-353776;
  2003-362315; 2003-391983; 2003-392393; 2003-401297; 2003-418353;
  2003-418436; 2003-465734; 2003-492022; 2003-557490; 2003-587433;
  2003-597620; 2003-615418; 2003-615425; 2003-655604; 2003-655616;
  2003-655715; 2003-656012; 2003-658647; 2003-659691; 2003-687554;
  2003-707329; 2003-730410; 2003-767701; 2003-777048; 2003-800216;
  2003-800961; 2003-802603; 2003-829683; 2003-897231; 2004-031964;
  2004-041644; 2004-059015; 2004-059948; 2004-070353; 2004-098221;
  2004-119479; 2004-155399; 2004-179244; 2004-179245; 2004-303569;
```

XRPX Acc No: N03-335283

Information encoding method for security document e.g. check, involves encoding payloads across substrate after payloads are concatenated in order to retrieve information

Patent Assignee: CARR J S (CARR-I); ELOVITZ A N (ELOV-I); HAWES J L
 (HAWE-I); HEIN W C (HEIN-I); MILLER M D (MILL-I); RHOADS G B (RHOA-I);
 STEWART S W (STEW-I)

Inventor: CARR J S; ELOVITZ A N; HAWES J L; HEIN W C; MILLER M D; RHOADS G
B; STEWART S W

Number of Countries: 001 Number of Patents: 001 Patent Family:

Patent No Kind Date Week Date Applicat No Kind US 20030056104 A1 20030320 US 94215289 Α 19940317 200339 B US 96614521 A 19960315 US 97967693 Α 19971112 US 9874034 19980506 Α US 98127502 19980731 Α 19991006 US 99158015 P US 99163676 P 19991105 US 2000571422 Α 20000515 US 2000694465 Α 20001023 US 2001939298 A · · 20010824 US 2001316851 Ρ 20010831 US 2001327687 Ρ 20011005 20020128 US 2002352652 Ρ 20020212 US 2002356881 P 20020306 US 200294593 Α US 2002154621 A 20020522 US 2002172506 A 20020614 Α US 2002172769 20020614

Priority Applications (No Type Date): US 2002233069 A 20020830; US 94215289 A 19940317; US 96614521 A 19960315; US 97967693 A 19971112; US 9874034 A 19980506; US 98127502 A 19980731; US 99158015 P 19991006; US 99163676 P 19991105; US 2000571422 A 20000515; US 2000694465 A 20001023; US 2001939298 A 20010824; US 2001316851 P 20010831; US 2001327687 P 20011005; US 2002352652 P 20020128; US 2002356881 P 20020212; US 200294593 A 20020306; US 2002154621 A 20020522; US 2002172506 A 20020614; US 2002172769 A 20020614

US 2002233069

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes
US 20030056104 A1 14 H04L-009/00 Cont of application US 94215289

Cont of application US 94215289 Cont of application US 96614521 CIP of application US 97967693 CIP of application US 9874034 CIP of application US 98127502 Provisional application US 99158015 Provisional application US 99163676 CIP of application US 2000571422 CIP of application US 2000694465 CIP of application US 2001939298 Provisional application US 2001316851 Provisional application US 2001327687 Provisional application US 2002352652 Provisional application US 2002356881 CIP of application US 200294593 CIP of application US 2002154621 CIP of application US 2002172506 CIP of application US 2002172769

Cont of patent US 5745604 CIP of patent US 6122392

A 20020830

CIP of patent US 6345104 CIP of patent US 6449377

Abstract (Basic): US 20030056104 A1

NOVELTY - Payloads are encoded across a substrate after payloads are concatenated in order to retrieve information. Information is divided into payload sets comprised of information subset. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (a) a check authentication; (b) an identification linking method; (c) a check clearing process truncating method; (d) a digital check image management system; (e) a system interaction; and (f) a washed security document identification. USE - For security document e.g. check, notes, mortgage, commercial paper, jewelry certificates, appraisal, insurance documentation. ADVANTAGE - Uses washable ink. Reduces risk of check being intercepted by counterfeiter. Authorizes cash or check deposit. DESCRIPTION OF DRAWING(S) - The figure shows the flowchart of an electronic check image digital watermarking method. pp; 14 DwgNo 5/6 Title Terms: INFORMATION; ENCODE; METHOD; SECURE; DOCUMENT; CHECK; ENCODE; SUBSTRATE; AFTER; CONCATENATED; ORDER; RETRIEVAL; INFORMATION Derwent Class: T01; T05 International Patent Class (Main): H04L-009/00 File Segment: EPI (Item 10 from file: 350) 3/5/30 DIALOG(R) File 350: Derwent WPIX (c) 2004 Thomson Derwent. All rts. reserv. 015357415 \*\*Image available\*\* WPI Acc No: 2003-418353/200339 Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129; 1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122; 2000-194736; 2000-195398; 2000-365779; 2000-490584; 2001-022904; 2001-335855; 2001-357503; 2001-374044; 2001-397673; 2001-425330; 2001-570080; 2001-580828; 2001-581298; 2001-581665; 2001-595705; 2001-607222; 2002-011177; 2002-041658; 2002-062159; 2002-082807; 2002-154357; 2002-163681; 2002-179003; 2002-188040; 2002-205513; 2002-224088; 2002-226224; 2002-235400; 2002-236852; 2002-238913; 2002-254659; 2002-256143; 2002-268672; 2002-361599; 2002-370756; 2002-382444; 2002-391512; 2002-392708; 2002-403568; 2002-405083; 2002-413035; 2002-435593; 2002-470507; 2002-498079; 2002-498923; 2002-507125; 2002-508021; 2002-556177; 2002-598923; 2002-636862; 2002-642228; 2002-654787; 2002-672857; 2002-673567; 2002-691185; 2002-697772; 2003-045908; 2003-074123; 2003-090293; 2003-137905; 2003-140183; 2003-174573; 2003-199024; 2003-238411; 2003-266622; 2003-268467; 2003-275465; 2003-327510; 2003-331365; 2003-353776; 2003-362315; 2003-362499; 2003-391983; 2003-392393; 2003-401297; 2003-418436; 2003-419904; 2003-465734; 2003-492022; 2003-557490; 2003-587433; 2003-597620; 2003-615418; 2003-615425; 2003-655604; 2003-655616; 2003-655715; 2003-656012; 2003-658647; 2003-659691; 2003-687554; 2003-707329; 2003-730410; 2003-767701; 2003-777048; 2003-800216; 2003-800961; 2003-802603; 2003-829683; 2003-897231; 2004-031964; 2004-059015; 2004-059948; 2004-070353; 2004-098221; 2004-119479; 2004-155399; 2004-179244; 2004-179245; 2004-303569; 2004-386915 XRPX Acc No: N03-333752 Digital watermark extraction method in multi-dimensional graphics application, involves detecting attributes associated with watermark signal, by performing logarithmic sampling of audio/video signals Patent Assignee: RHOADS G B (RHOA-I); SHARMA R K (SHAR-I); DIGIMARC CORP (DIGI-N) Inventor: RHOADS G B ; SHARMA R K Number of Countries: 001 Number of Patents: 002 Patent Family: Kind Date Applicat No Kind Date Week Patent No US 20030039377 A1 20030227 US 96649419 A 19960516 200339 B

US 96746613 Α 19961112 A 19981105 US 98186962 US 99452023 A 19991130 US 2002202367 A 20020722 US 96649419 US 6704869 B2 20040309 A 19960516 200425 US 96746613 A 19961112 US 99452023 A 19991130 US 2000566533 A 20000508 US 2002202367 A 20020722

Priority Applications (No Type Date): US 2000566533 A 20000508; US 96649419 A 19960516; US 96746613 A 19961112; US 98186962 A 19981105; US 99452023 A 19991130; US 2002202367 A 20020722

Patent Details:

Patent No Kind Lan Pg Main IPC US 20030039377 A1 13 G06K-009/00

Filing Notes

Cont of application US 96649419 CIP of application US 96746613 CIP of application US 98186962 CIP of application US 99452023 Cont of application US 2000566533 Cont of patent US 5862260

CIP of patent US 6122403 CIP of patent US 6408082

Cont of patent US 6424725

US 6704869 B2 H04L-009/00

Cont of application US 96649419 CIP of application US 96746613 CIP of application US 99452023 Cont of application US 2000566533

Cont of patent US 5862260 CIP of patent US 6122403 CIP of patent US 6408082 Cont of patent US 6424725

Abstract (Basic): US 20030039377 A1

NOVELTY - The method performs logarithmic sampling of a media signal such as audio/video signal, to produce a sampled signal. The sampled signal is analyzed in order to detect attributes associated with a watermark signal. Based on the detected attributes, the digital watermark is extracted.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for computer-readable medium storing instructions for extracting digital watermark.

USE - For extracting digital watermark in multi-dimensional or graphics applications.

ADVANTAGE - The detection of attributes enable determination of the position of the watermark in a suspected signal, even in case where the signal has been translated subsequent to encoding of the watermark or corrupted.

DESCRIPTION OF DRAWING(S) - The figure shows the flowchart illustrating the watermark detection process.

pp; 13 DwgNo 1/5

Title Terms: DIGITAL; WATERMARK; EXTRACT; METHOD; MULTI; DIMENSION; GRAPHIC; APPLY; DETECT; ATTRIBUTE; ASSOCIATE; WATERMARK; SIGNAL; PERFORMANCE; LOGARITHM; SAMPLE; AUDIO; VIDEO; SIGNAL

Derwent Class: T01; T04

International Patent Class (Main): G06K-009/00; H04L-009/00

File Segment: EPI

3/5/31 (Item 11 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015269115 \*\*Image available\*\*
WPI Acc No: 2003-330044/200331

XRPX Acc No: N03-264153

```
Background watermark processing computer used in steganography, analyzes
  audio/video content stored in memory using software, and alters operation
  upon detection of digital watermark data, automatically
Patent Assignee: DIGIMARC CORP (DIGI-N)
Inventor: RHOADS G B
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No
              Kind
                     Date
                              Applicat No
                                             Kind
                                                    Date
                                                             Week
                                                             200331 B
US 20030009670 A1 20030109 US 2001825463
                                                   20010402
                                             Α
Priority Applications (No Type Date): US 2001825463 A 20010402
Patent Details:
Patent No Kind Lan Pg
                        Main IPC
                                      Filing Notes
US 20030009670 A1 110 H04L-009/00
Abstract (Basic): US 20030009670 A1
        NOVELTY - The computer automatically analyzes the audio/video
    contents stored in its memory using a software, and alters its
    operation with respect to the contents upon detection of digital
    watermark data.
        DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for
    background watermark processing method.
    USE - In steganography for processing images in smart business cards such as credit card, debit card, cash card, medical records,
    identification/authentication tag in automobile, airline industry.
        ADVANTAGE - Provides enhanced security for the audio/video
    contents.
        DESCRIPTION OF DRAWING(S) - The figure shows a hierarchical
    arrangement of signature blocks, sub-blocks and bit cells used in
    background watermark processing.
        pp; 110 DwgNo 42/59
Title Terms: BACKGROUND; WATERMARK; PROCESS; COMPUTER; ANALYSE; AUDIO;
  VIDEO; CONTENT; STORAGE; MEMORY; SOFTWARE; ALTER; OPERATE; DETECT;
  DIGITAL; WATERMARK; DATA; AUTOMATIC
Derwent Class: S05; T01; T04; T05
International Patent Class (Main): H04L-009/00
International Patent Class (Additional): H04N-007/167
File Segment: EPI
 3/5/32
            (Item 12 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
015207931
             **Image available**
WPI Acc No: 2003-268467/200326
Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
  1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122;
  2000-194736; 2000-195398; 2000-365779; 2000-464989; 2000-490584;
  2000-647035; 2001-022904; 2001-335855; 2001-357503; 2001-374044;
  2001-397673; 2001-425330; 2001-570080; 2001-580828; 2001-581298;
  2001-581665; 2001-595705; 2001-607222; 2002-011177; 2002-041658;
  2002-062159; 2002-082807; 2002-154357; 2002-163681; 2002-179003;
  2002-188040; 2002-205513; 2002-224088; 2002-226224; 2002-235400;
  2002-236852; 2002-238913; 2002-239839; 2002-254659; 2002-256143;
  2002-268672; 2002-315095; 2002-361599; 2002-361694; 2002-370756;
  2002-382444; 2002-391512; 2002-392708; 2002-393501; 2002-394013;
  2002-403568; 2002-405083; 2002-413035; 2002-416925; 2002-435593;
  2002-470507; 2002-479804; 2002-498079; 2002-498923; 2002-507125;
  2002-508021; 2002-528580; 2002-556177; 2002-590019; 2002-598923;
  2002-636862; 2002-642228; 2002-654787; 2002-672857; 2002-673567;
  2002-681419; 2002-691185; 2002-697772; 2002-698265; 2003-045908;
  2003-074123; 2003-090293; 2003-137905; 2003-140183; 2003-174573;
  2003-199024; 2003-238411; 2003-266622; 2003-275465; 2003-327510;
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2003-331365; 2003-353776; 2003-362315; 2003-391983; 2003-392393; 2003-401297; 2003-418353; 2003-418436; 2003-419904; 2003-465734; 2003-492022; 2003-557490; 2003-587433; 2003-597620; 2003-615418;

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2003-615425; 2003-655604; 2003-655616; 2003-655715; 2003-656012;
  2003-658647; 2003-659691; 2003-687554; 2003-707329; 2003-730410;
 2003-767701; 2003-777048; 2003-800216; 2003-800961; 2003-802603;
 2003-829683; 2003-897231; 2004-031964; 2004-041644; 2004-059015;
  2004-059948; 2004-070353; 2004-098221; 2004-119479; 2004-155399;
  2004-179244; 2004-179245; 2004-303569; 2004-386915
XRPX Acc No: N03-213303
 Method of encoding information for water-marking electronic data for
  security reasons, by the use of an additional substrate
Patent Assignee: HAWES J L (HAWE-I); DIGIMARC CORP (DIGI-N)
Inventor: HAWES J L; CARR J S; ELOVITZ A N; HIEN W C; MILLER M D; RHOADS G
 B ; STEWART S W
Number of Countries: 100 Number of Patents: 002
Patent Family:
Patent No
             Kind
                    Date
                            Applicat No
                                          Kind
                                                 Date
             A2 20030306 WO 2002US27954 A
                                                20020830 200326 B
WO 200319449
US 20030150922 A1 20030814 US 2002356881
                                            P
                                                20020212 200355
                            US 200294593
                                            Α
                                                20020306
                            US 2002172506
                                            Α
                                                20020614
Priority Applications (No Type Date): US 2002172769 A 20020614; US
 2001316851 P 20010831; US 2001327687 P 20011005; US 2002352652 P 20020128
  ; US 2002172506 A 20020614; US 2002356881 P 20020212; US 200294593 A
  20020306
Patent Details:
Patent No Kind Lan Pg
                       Main IPC
                                    Filing Notes
WO 200319449 A2 E 27 G06F-017/60
  Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
  CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
  IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
  OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU
   Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB
  GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
US 20030150922 A1
                       G06K-019/06
                                    Provisional application US 2002356881
                                    CIP of application US 200294593
Abstract (Basic): WO 200319449 A2
       NOVELTY - The information encoding method uses a security document
    (100) which has an additional substrate (102) which can be printed on.
   The information printed on this substrate is hidden and corresponds to
   specific text or numerals located within the document. The security
    information is divided into a number of payload sets.
       DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a
   digital checking system.
       USE - For water-marking electronic data for security reasons.
       ADVANTAGE - This method provides enhanced security for electronic
   documents.
       DESCRIPTION OF DRAWING(S) - The figure shown is a schematic diagram
   of a check.
       Check (100)
       Security substrate (102)
       pp; 27 DwgNo 1/6
Title Terms: METHOD; ENCODE; INFORMATION; WATER; MARK; ELECTRONIC; DATA;
 SECURE; REASON; ADD; SUBSTRATE
Derwent Class: T01; T04; W01; W02
International Patent Class (Main): G06F-017/60; G06K-019/06
International Patent Class (Additional): G06K-009/00; H04K-001/00;
 H04L-009/00
File Segment: EPI
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3/5/33 (Item 13 from file: 350)
DIALOG(R) File 350: Derwent WPIX

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WPI Acc No: 2003-090293/200308
Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
  1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122;
  2000-194736; 2000-195398; 2000-365779; 2000-490584; 2001-022904;
  2001-335855; 2001-357503; 2001-374044; 2001-397673; 2001-425330;
  2001-570080; 2001-580828; 2001-581298; 2001-581665; 2001-595705;
  2001-607222; 2002-011177; 2002-041658; 2002-082807; 2002-154357;
  2002-163681; 2002-179003; 2002-188040; 2002-205513; 2002-224088;
  2002-226224; 2002-235400; 2002-236852; 2002-238913; 2002-254659;
  2002-256143; 2002-268672; 2002-361599; 2002-370756; 2002-382444;
  2002-391512; 2002-392708; 2002-403568; 2002-405083; 2002-413035;
  2002-435593; 2002-470507; 2002-498079; 2002-498923; 2002-507125;
  2002-508021; 2002-556177; 2002-598923; 2002-636862; 2002-642228;
  2002-654787; 2002-672857; 2002-673567; 2002-691185; 2002-697772;
  2003-045908; 2003-074123; 2003-137905; 2003-174573; 2003-199024;
  2003-238411; 2003-266622; 2003-268467; 2003-275465; 2003-327510;
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  2003-492022; 2003-557490; 2003-587433; 2003-597620; 2003-615418;
  2003-615425; 2003-655604; 2003-655616; 2003-655715; 2003-656012;
  2003-658647; 2003-659691; 2003-687554; 2003-707329; 2003-730410;
  2003-767701; 2003-777048; 2003-800216; 2003-800961; 2003-802603;
  2003-829683; 2003-897231; 2004-031964; 2004-059015; 2004-059948;
  2004-070353; 2004-098221; 2004-119479; 2004-155399; 2004-179244;
  2004-179245; 2004-303569; 2004-386915
XRPX Acc No: N03-071278
  Digital elevation model processing method for reconnaissance and remote
  sensing systems, involves watermarking image data acquired by satellite
  and generating map accordingly
Patent Assignee: RHOADS G B (RHOA-I)
Inventor: RHOADS G B
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No
             Kind
                     Date
                             Applicat No
                                            Kind
                                                   Date
US 20020124171 A1 20020905 US 2001800093
                                                20010305 200308 B
                                            Α
Priority Applications (No Type Date): US 2001800093 A 20010305
Patent Details:
Patent No Kind Lan Pg
                       Main IPC
                                     Filing Notes
                      7 G09G-005/00
US 20020124171 A1
Abstract (Basic): US 20020124171 A1
        NOVELTY - The image data acquired by a satellite is watermarked and
    stored in a database. A map is generated from the database is
    watermarked.
        DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for
    database storing component map data.
        USE - For processing Digital Elevation Model of earth surfaces such
    as buildings, man-made object, geological features acquired by a
    satellite for applications such as reconnaissance and remote sensing
    systems, guidance of piloted, remotely piloted vehicles. Also
    applicable to other forms of aerial surveillance data, albedo map and
    other topographic/mapping information obtained from aerial images,
    ground survey, watermarking of movie data in digital cinema
    applications.
        ADVANTAGE - The imagery is automatically geo-referenced and
    combined with previously-collected data sets so as to facilitate
    generation of up-to-data Digital Elevation Model and map.
        pp; 7 DwgNo 0/0
Title Terms: DIGITAL; ELEVATE; MODEL; PROCESS; METHOD; RECONNAISSANCE;
  REMOTE; SENSE; SYSTEM; WATERMARK; IMAGE; DATA; ACQUIRE; SATELLITE;
  GENERATE; MAP; ACCORD
Derwent Class: P85; T01; W04; W06
International Patent Class (Main): G09G-005/00
International Patent Class (Additional): G06F-007/00; G06F-017/00;
  H04L-009/00
File Segment: EPI; EngPI
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3/5/34
            (Item 14 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
014877066
             **Image available**
WPI Acc No: 2002-697772/200275
Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
  1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122;
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  2004-119479; 2004-155399; 2004-179244; 2004-179245; 2004-246589;
  2004-303569; 2004-386915
XRPX Acc No: N02-550233
  Digital watermark embedding method for authentication of printed objects,
  involves detecting errors introduced by incorrect reproduction of
 unstable halftone screen structure by reading embedded auxiliary signal
  in digital image
Patent Assignee: BRUNK H L (BRUN-I); HAYNES M E (HAYN-I); RHOADS G B
  (RHOA-I); RODRIGUEZ T F (RODR-I); DIGIMARC CORP (DIGI-N)
Inventor: BRUNK H L; HAYNES M E; RHOADS G B; RODRIGUEZ T F
Number of Countries: 100 Number of Patents: 002
Patent Family:
Patent No.
              Kind
                     Date
                             Applicat No
                                             Kind
                                                    Date
                                                             Week
US 20020099943 A1
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                                                             200275 B
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                                                   20010124
                             US 2001938870
                                                  20010823
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WO 200319465
                   20030306
                             WO 2002US27068 A 20020823
                                                            200319
Priority Applications (No Type Date): US 2001263987 P 20010124; US
  2001938870 A 20010823
Patent Details:
Patent No Kind Lan Pq
                        Main IPC
                                      Filing Notes
US 20020099943 A1
                      9 H04L-009/00
                                      Provisional application US 2001263987
WO 200319465 A1 E
                       G06K-009/46
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
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   IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
   OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU
   ZA ZM ZW
   Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB
   GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
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Abstract (Basic): US 20020099943 A1

NOVELTY - An auxiliary signal is embedded in a digital image such that the signal is imperceptible and machine-readable. The image is converted to a halftone image using unstable halftone screen structure. The ink flow errors introduced by incorrect reproduction of unstable halftone screen structure are automatically detectable by reading the auxiliary signal.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- Computer readable medium having program for performing digital watermark embedding process;
  - (2) Printed object carrying halftone image;
  - (3) Printed object authenticating method; and
- (4) Computer readable medium having program for authenticating printed object.

USE - For embedding digital watermark in images, audio signals, video signals, text documents, software, multi-directional graphics models and surface texture of objects for authenticating the printed objects.

ADVANTAGE - Enables detection of copying or photo duplication and printing/re-scanning of printed object. Enables automatic authentication with lower quality camera devices such as web cams and common image scanners. Allows watermarks to serve the function of determining authenticating as well as carrying a message payload useful for variety of applications.

DESCRIPTION OF DRAWING(S) - The figure illustrates flow diagram of illustrating the steps of watermark embedding and halftone screen processing programs.

pp; 9 DwgNo 1/3

Title Terms: DIGITAL; WATERMARK; EMBED; METHOD; AUTHENTICITY; PRINT; OBJECT ; DETECT; ERROR; INTRODUCING; INCORRECT; REPRODUCE; UNSTABLE; HALFTONE; SCREEN; STRUCTURE; READ; EMBED; AUXILIARY; SIGNAL; DIGITAL; IMAGE Derwent Class: T01; T04; W01

2004-179245; 2004-303569; 2004-386915

International Patent Class (Main): G06K-009/46; H04L-009/00

International Patent Class (Additional): H04N-001/44

(Item 15 from file: 350)

File Segment: EPI

3/5/35

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DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
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WPI Acc No: 2002-642228/200269
Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
  1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122;
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  2003-492022; 2003-557490; 2003-587433; 2003-597620; 2003-615418;
  2003-615425; 2003-655604; 2003-655616; 2003-655715; 2003-656012;
  2003-658647; 2003-659691; 2003-687554; 2003-707329; 2003-730410;
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  2003-829683; 2003-897231; 2004-031964; 2004-059015; 2004-059948;
  2004-070353; 2004-098221; 2004-119479; 2004-155399; 2004-179244;
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and the contract of the contra

Steganographically embedded copyright data decoding method involves counteracting errors introduced into processed content data, during data decoding

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Patent Assignee: RHOADS G B (RHOA-I); DIGIMARC CORP (DIGI-N)
Inventor: RHOADS G B
Number of Countries: 001 Number of Patents: 002
Patent Family:
Patent No
           Kind
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US 20020085718 A1 20020704 US 93154866
                                          A 19931118 200269 B
                           US 94215289
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                                         A 19941021
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                                          A 19971016
                           US 2000482752 A 20000113
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US 6654887
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Priority Applications (No Type Date): US 95436134 A 19950508; US 93154866 A
  19931118; US 94215289 A 19940317; US 94327426 A 19941021; US 97951858 A
  19971016; US 2000482752 A 20000113; US 2001963343 A 20010925
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
US 20020085718 A1 58 H04N-007/167 CIP of application US 93154866
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                                   CIP of patent US 5768426
                                   Div ex patent US 6026193
                                 Div ex patent US 6330335
Abstract (Basic): US 20020085718 A1
       NOVELTY - An error information relating to errors, introduced into
    the processed content data is obtained. When decoding the content data,
    the errors are counteracted using a filter.
       USE - For decoding steganographically embedded copyright data from
   multimedia data.
       ADVANTAGE - Enables reliable decoding of steganographically
   embedded copyright information, by counteracting the computed media
   content.
       pp; 58 DwgNo 0/27
Title Terms: EMBED; DATA; DECODE; METHOD; COUNTERACT; ERROR; INTRODUCING;
  PROCESS; CONTENT; DATA; DATA; DECODE
Derwent Class: W02
International Patent Class (Main): H04L-009/34; H04N-007/167
International Patent Class (Additional): G06K-009/46
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File Segment: EPI

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(c) 2004 Thomson Derwent. All rts. reserv.
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  2004-179244; 2004-179245; 2004-246589; 2004-303569; 2004-386915
XRPX Acc No: N02-503105
 Digital watermarking process for use with map data, e.g. acquired by
  satellite and other sensors uses GPS information to compare with
 information extracted from image
Patent Assignee: DIGIMARC CORP (DIGI-N); LOFGREN N E (LOFG-I); RHOADS G B
  (RHOA-I); CLEMENTS L (CLEM-I); LOFGREN N A (LOFG-I); PATTERSON P R
  (PATT-I); BRUNDAGE T J (BRUN-I); LOFGREN N (LOFG-I); HEIN W C (HEIN-I);
 MACLNTOSH B T (MACL-I); SEDER P A (SEDE-I); LOWE B D (LOWE-I); MCKINLEY T
  J (MCKI-I); ANGLIN H W (ANGL-I); BRUNK H L (BRUN-I); CATTONE J (CATT-I);
 HUDSON E C (HUDS-I); JONES K C (JONE-I); LEVY K L (LEVY-I); PERRY B W
  (PERR-I); STEWART S W (STEW-I); CARR J S (CARR-I); CHRISTOPHER M S
  (CHRI-I); CONWELL W Y (CONW-I); HANNIGAN B T (HANN-I); MEYER J R (MEYE-I)
  ; STAGER R R (STAG-I); WEAVER M M (WEAV-I)
Inventor: BRUNDAGE T J; CLEMENTS L R; LOFGREN N E; PATTERSON P R; RHOADS G
 B ; CLEMENTS L; LOFGREN N A; LOFGREN N; HEIN W C; MACLNTOSH B T; SEDER P
 A; LOWE B D; MCKINLEY T J; ANGLIN H W; BRUNK H L; CATTONE J; HUDSON E C;
  JONES K C; LEVY K L; PERRY B W; STEWART S W; CARR J S; CHRISTOPHER M S;
  CONWELL W Y; HANNIGAN B T; MEYER J R; STAGER R R; WEAVER M M
Number of Countries: 100 Number of Patents: 011
Patent Family:
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Patent No
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              A1 20020912
                            WO 2002US6858
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Priority Applications (No Type Date): US 2001997400 A 20011128; US
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  ; US 2001284776 P 20010418; US 2001858336 A 20010515; US 20012954 A
  20011023; US 2002100233 A 20020313; US 2000697009 A 20001025; US
  2002121433 A 20020411; US 2002121435 A 20020411; US 2002122141 A 20020412
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Patent Details:
Patent No Kind Lan Pg Main IPC
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WO 200271685 A1 E 62 H04L-009/00
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
   CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
   IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
  OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU
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AU 2002242325 A1
                      H04L-009/00
                                     Based on patent WO 200271685
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Abstract (Basic): WO 200271685 Al

NOVELTY - Watermark location information is extracted from an image. The physical location is then determined using e.g. GPS. The location information is compared with the physical location, to check whether they match or are inconsistent.

DETAILED DESCRIPTION - INDEPENDENT claims are also included for the following:

<sup>(1)</sup> An apparatus to read digital watermarks embedded within a map.

```
(3) A module for use in a network.
                   (4) An article of manufacture comprising steganographically
         embedded data.
                  USE - For use with map data, e.g. acquired by satellite and other
                                                                             the control of the co
                                                                   . .
                 ADVANTAGE - Enables improved management and coordination of huge
         amounts of aerial imagery.
                  DESCRIPTION OF DRAWING(S) - The drawing shows a flow diagram of the
         method.
                  pp; 62 DwgNo 4/16
Title Terms: DIGITAL; WATERMARK; PROCESS; MAP; DATA; ACQUIRE; SATELLITE;
    SENSE; GROUP; INFORMATION; COMPARE; INFORMATION; EXTRACT; IMAGE
Derwent Class: P82; P85; T01; W06
International Patent Class (Main): C12Q-001/68; G03B-017/24; G06F-007/00;
    G06F-009/00; G06F-017/00; G06K-009/00; G09G-005/00; H04K-001/00;
    H04L-009/00
International Patent Class (Additional): G01N-033/48; G01N-033/50;
    G06F-011/30; G06F-012/14; G06F-017/60; G06F-019/00; G09C-003/00;
    G09C-005/00; H04L-009/32; H04L-015/34; H04N-007/167
File Segment: EPI; EngPI
  3/5/37
                            (Item 17 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
014707803
                             **Image available**
WPI Acc No: 2002-528507/200256
Related WPI Acc No: 2003-067657
XRPX Acc No: N02-418473
    Audio or video content tracking method for broadcast monitoring, involves
    decoding forensic identifier associated with forensic database and
    forensic identifier associated with user
Patent Assignee: DIGIMARC CORP (DIGI-N); HIATT R S (HIAT-I); LEVY K L
     (LEVY-I); RHOADS G B (RHOA-I)
Inventor: HIATT R S; LEVY K L; RHOADS G B
Number of Countries: 100 Number of Patents: 003
Patent Family:
Patent No
                                                Date
                                                                   Applicat No
                               Kind
                                                                                                     Kind Date
                                                                                                                                         Week
WO 200250760 A1 20020627 WO 2001US49395 A 20011217 200256 B
AU 200235231 A 20020701 AU 200235231 A 20011217 200264
US 20030056103 A1 20030320 US 2000256628 P 20001218 200323
                                                                                                  A 20011213
                                                                   US 200117679
Priority Applications (No Type Date): US 200117679 A. 20011213; US
    2000256628 P 20001218; US 2001336209 P 20011030
Patent Details:
Patent No Kind Lan Pg
                                                      Main IPC
                                                                                     Filing Notes
WO 200250760 A1 E 75 G06K-009/00
       Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
       CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
       IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
       OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU
       ZA ZM ZW
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       IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
AU 200235231 A
                                           G06K-009/00 Based on patent WO 200250760
US 20030056103 A1
                                                     H04L-009/00 Provisional application US 2000256628
Abstract (Basic): WO 200250760 A1
                  NOVELTY - A forensic identifier in a digital watermark, associated
         with a forensic database, is decoded. Another forensic identifier
         associated with the user is also decoded.
                   DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the
                                                                             the contract of the contract o
                                                    . .

    Digital watermarking method;
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(2) A system comprising user terminals, database and gatekeeper.

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(2) Computer readable medium storing digital watermarking program;
    and
        (3) Broadcast monitoring system.
        USE - For broadcast monitoring, copyright communication, copy/play
    control, file verification, personal computer (PC) connected to
    e-commerce, forensic tracking, content monitoring, asset management and
    set-top box connected to e-commerce.
        ADVANTAGE - Standardization of data allows the architecture to
    support a wide variety of systems. Allows content owners to buy and
    sell content with minimal changes with no changes to the watermark
    payload.
        DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of
    the connected application's system overview.
        pp; 75 DwgNo 1/11
Title Terms: AUDIO; VIDEO; CONTENT; TRACK; METHOD; BROADCAST; MONITOR;
  DECODE; FORENSIC; IDENTIFY; ASSOCIATE; FORENSIC; DATABASE; FORENSIC;
  IDENTIFY; ASSOCIATE; USER
Derwent Class: T01; W01; W02
International Patent Class (Main): G06K-009/00; H04L-009/00
International Patent Class (Additional): G06F-017/30
File Segment: EPI
 3/5/38
            (Item 18 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
014659100
            **Image available**
WPI Acc No: 2002-479804/200251
Related WPI Acc No: 1996-518986; 1997-310156; 1998-009129; 1998-110064;
  1998-286225; 1999-204782; 1999-444465; 2000-013122; 2000-194736;
  2000-195398; 2000-365779; 2000-464989; 2000-490584; 2000-647035;
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  2002-239839; 2002-254659; 2002-256143; 2002-268672; 2002-315095;
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  2002-393501; 2002-394013; 2002-405083; 2002-413035; 2002-416925;
  2002-435593; 2002-498079; 2002-498923; 2002-507125; 2002-508021;
  2002-528580; 2002-556177; 2002-636862; 2002-654787; 2002-672857;
  2002-673567; 2002-697772; 2002-698265; 2002-750104; 2003-045908;
  2003-074123; 2003-137905; 2003-140183; 2003-268467; 2003-327510;
  2003-401297; 2003-419904; 2003-465734; 2003-587433; 2003-615418;
  2003-615425; 2003-655616; 2003-655715; 2003-656012; 2003-767701;
  2003-777048; 2003-800216; 2003-800961; 2004-041644; 2004-059948;
  2004-386915
XRPX Acc No: N02-378877
  Performing method for identifier registration for encoding information
  into media signals using batch identifier registration system to enable
  user to submit request for batch of unique identifiers to be embedded in
 media signals
Patent Assignee: DIGIMARC CORP (DIGI-N); HEIN W C (HEIN-I); MCKINLEY T J
  (MCKI-I); REED A M (REED-I); RHOADS G B (RHOA-I); RODRIGUEZ T F (RODR-I);
  ALATTAR O M (ALAT-I); BRUNDAGE T J (BRUN-I); BRUNK H L (BRUN-I);
  PATTERSON P R (PATT-I); CARR J S (CARR-I); CHRISTOPHER M S (CHRI-I);
  CONWELL W Y (CONW-I); HANNIGAN B T (HANN-I); LEVY K L (LEVY-I); MEYER J R
  (MEYE-I); SEDER P A (SEDE-I); STAGER R R (STAG-I); WEAVER M M (WEAV-I)
Inventor: HEIN W C; MCKINLEY T J; REED A M; RHOADS G B; RODRIGUEZ T F;
 ALATTAR O M; BRUNDAGE T J; BRUNK H L; PATTERSON P R; CARR J S;
  CHRISTOPHER M S; CONWELL W Y; HANNIGAN B T; LEVY K L; MEYER J R; SEDER P
 A; STAGER R R; WEAVER M M; MCKINLEY J T; REED M A; RHOADS B G; RODRIGUEZ
Number of Countries: 095 Number of Patents: 008
Patent Family:
Patent No
            Kind Date Applicat No Kind Date
                                                           Week
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WO 200239235
             A2 20020516 WO 2001US51170 A
                                                 20011102
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US 20020120849 A1 20020829 US 2000503881
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                                                 20000214 200259
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US 6763124
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                                                20010925
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                                                20020211
Priority Applications (No Type Date): US 2001327687 P 20011005; US
  2000706505 A 20001102; US 2000503881 A 20000214; US 200153488 A 20011102;
  US 2000553084 A 20000419; US 2001963344 A 20010925; US 200274677 A
  20020211; US 2002265085 A 20021003; US 2001284163 P 20010416; US
  200112676 A 20011105; US 2002122141 A 20020412; US 2002265348 A 20021004
Patent Details:
Patent No Kind Lan Pg
                         Main IPC
                                     Filing Notes
WO 200239235 A2 E 52 G06F-000/00
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   CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS
   JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL
   PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
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   IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
US 20020120849 A1
                       H04L-009/00
                                      CIP of application US 2000503881
                                     CIP of application US 2000706505
                                     Provisional application US 2001327687
AU 200236678 A
                       G06F-000/00
                                     Based on patent WO 200239235
US 20020126873 A1
                       G06K-009/00
                                      CIP of application US 2000553084
                                     CIP of application US 2001963344
                                     Provisional application US 2001327687
US 20030058477 A1
                       G06K-015/00
US 20030167235 A1
                        G06F-017/60
                                      Provisional application US 2001327687
US 20030187798 A1
                        H04K-001/00
                                      Provisional application US 2001284163
                                     Provisional application US 2001327687
                                     CIP of application US 200112676
                                     CIP of application US 2002122141
                                     CIP of application US 2000553084
US 6763124
             B2
                       G06K-009/00
                                     CIP of application US 2001963344
                                     Provisional application US 2001327687
                                     CIP of patent US 6590996
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Abstract (Basic): WO 200239235 A2

NOVELTY - The method involves establishing a connection with a registration process. Authentication information is provided to the registration process. A registration request is submitted to the registration process. Finally an embedder control file is received, including media signal identifiers and embedder instructions.

The embedder control file is submitted to a water mark embedder which automatically embeds a set of media files with corresponding identifiers according to the embedder instructions in the embedder control file.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for a

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identifier registration server, for a method of segmenting a media
   signal for parallel watermarking operations and for a distributed
   digital watermark embedder.
                                  USE - For encoding information into media signals.
       ADVANTAGE - Automates processes for batch embedding of identifiers
   into media content to prevent bottlenecks in content creation.
       DESCRIPTION OF DRAWING(S) - The figure shows a batch identifier
    registration and watermark embedding system.
       pp; 52 DwgNo 1/7
Title Terms: PERFORMANCE; METHOD; IDENTIFY; REGISTER; ENCODE; INFORMATION;
 MEDIUM; SIGNAL; BATCH; IDENTIFY; REGISTER; SYSTEM; ENABLE; USER; SUBMIT;
 REQUEST; BATCH; UNIQUE; IDENTIFY; EMBED; MEDIUM; SIGNAL
Derwent Class: P85; T01; W06
International Patent Class (Main): G06F-000/00; G06F-017/60; G06K-009/00;
  G06K-015/00; H04K-001/00; H04L-009/00
International Patent Class (Additional): G06K-015/02; G09C-003/00;
  G09C-005/00; H04N-001/40; H04N-007/167
File Segment: EPI; EngPI
            (Item 19 from file: 350)
3/5/39
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
014435440
            **Image available**
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Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
 1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122;
  2000-194736; 2000-195398; 2000-365779; 2000-464989; 2000-490584;
  2000-647035; 2001-022904; 2001-335855; 2001-357503; 2001-374044;
  2001-397673; 2001-425330; 2001-570080; 2001-580828; 2001-581298;
  2001-581665; 2001-595705; 2001-607222; 2002-011177; 2002-041658;
  2002-062159; 2002-082807; 2002-154357; 2002-163681; 2002-179003;
  2002-188040; 2002-205513; 2002-224088; 2002-226224; 2002-235400;
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  2002-528580; 2002-556177; 2002-598923; 2002-636862; 2002-642228;
 2002-654787; 2002-672857; 2002-673567; 2002-691185; 2002-697772;
 2003-045908; 2003-074123; 2003-090293; 2003-137905; 2003-140183;
  2003-174573; 2003-199024; 2003-238411; 2003-266622; 2003-268467;
  2003-275465; 2003-327510; 2003-331365; 2003-353776; 2003-362315;
  2003-362499; 2003-391983; 2003-392393; 2003-401297; 2003-418353;
  2003-418436; 2003-419904; 2003-465734; 2003-492022; 2003-557490;
  2003-587433; 2003-597620; 2003-615418; 2003-615425; 2003-655604;
  2003-655616; 2003-655715; 2003-656012; 2003-658647; 2003-659691;
  2003-687554; 2003-707329; 2003-730410; 2003-767701; 2003-777048;
  2003-800216; 2003-800961; 2003-802603; 2003-829683; 2003-897231;
  2004-031964; 2004-041644; 2004-059015; 2004-059948; 2004-070353;
  2004-098221; 2004-119479; 2004-155399; 2004-179244; 2004-179245;
  2004-303569; 2004-386915
XRPX Acc No: NO2-198140
 Digital watermark screening and detection by screening a suspect signal
  to compute detection values evincing presence and strength of a watermark
Patent Assignee: DIGIMARC CORP (DIGI-N); RHOADS G B (RHOA-I); SHARMA R K
  (SHAR-I)
Inventor: RHOADS G B ; SHARMA R K
Number of Countries: 095 Number of Patents: 004
Patent Family:
Patent No
             Kind
                    Date
                            Applicat No
                                           Kind
                                                  Date
                                                           Week
WO 200169518 A1 20010920 WO 2001US7373 A . . 20010307
                                                          200230. B..
AU 200140105
                  20010924
                            AU 200140105
                                           A 20010307
                                                          200230
             А
US 6516079
             B1 20030204 US 2000503881 A 20000214
                                                          200313
                            US 2000526982 A 20000315
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computer readable medium, for a watermark embedder, for a media signal

US 2000526982 A 20000315 US 2003359015 A 20030204

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Priority Applications (No Type Date): US 2000526982 A 20000315; US
  2000503881 A 20000214; US 2003359015 A 20030204
Patent Details:
Patent No Kind Lan Pg
                        Main IPC
                                     Filing Notes
WO 200169518 A1 E 23 G06K-009/00
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
   CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS
   JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL
   PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
   Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
   IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
                                     Based on patent WO 200169518
AU 200140105 A
                       G06K-009/00
                                     CIP of application US 2000503881
US 6516079
             В1
                        G06K-009/00
                                      CIP of application US 2000503881
US 20030174862 A1
                                     Cont of application US 2000526982
                                     Cont of patent US 6516079
Abstract (Basic): WO 200169518 A1
        NOVELTY - A detector correlates the calibration signal or its
    attributes to a suspect signal, 202, using a watermark key to select
    initial portions of the suspect signal expected to contain a watermark
    in order to compute correlation values for candidate portions 204 and
    the detector then computes relative detection values based on the
    detection values, 206, for control of further detection actions.
    Unmarked signals are screened and accepted or rejected, 208, or direct
    further detection operations are performed on the signal, 210.
        DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for a method
    of using detection values to control watermark detection and for a
    computer readable medium with detection software.
        USE - Watermark detection in multimedia content.
        ADVANTAGE - Using absolute and relative detection values to provide
    complementary information.
        DESCRIPTION OF DRAWING(S) - The drawing is a flow diagram of the
    process.
        pp; 23 DwgNo 2/4
Title Terms: DIGITAL; WATERMARK; SCREEN; DETECT; SCREEN; SUSPECT; SIGNAL;
  COMPUTATION; DETECT; VALUE; PRESENCE; STRENGTH; WATERMARK
Derwent Class: T01; W01; W02; W03; W04
International Patent Class (Main): G06K-009/00
International Patent Class (Additional): G06K-009/36; G07D-007/00;
  H03M-001/22; H04K-001/00; H04L-009/00; H04N-007/16; H04N-009/64;
  H04N-011/00
File Segment: EPI
 3/5/40
            (Item 20 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
             **Image available**
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Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
  1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122;
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 2003-268467; 2003-275465; 2003-327510; 2003-331365; 2003-353776;
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 2003-800216; 2003-800961; 2003-802603; 2003-829683; 2003-897231;
 2004-031964; 2004-041644; 2004-059015; 2004-059948; 2004-070353;
  2004-098221; 2004-119479; 2004-155399; 2004-179244; 2004-179245;
  2004-303569; 2004-386915
XRPX Acc No: N02-061747
 Method of encoding auxiliary information in image by computing change in
  attribute of image sample to encode auxiliary information in image and
  changing color values of image sample to effect change in image sample
Patent Assignee: DIGIMARC CORP (DIGI-N); REED A M (REED-I); RHOADS G B
  (RHOA-I)
                                           . . . .
                                                 . . . . . . .
Inventor: REED A M; RHOADS G B
Number of Countries: 095 Number of Patents: 006
Patent Family:
Patent No
             Kind
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                            Applicat No
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                                                  Date
                                                           Week
WO 200182215
              A1 20011101
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                                                20010417
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                            US 2000553084
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                            US 2002209053
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US 20040125983 A1 20040701 US 2000503881 A 20000214 200443
                            US 2000553084
                                            Α
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                            US 2003613913
                                                20030703
Priority Applications (No Type Date): US 2000553084 A 20000419; US
  2002209053 A 20020730; US 2000503881 A 20000214; US 2003613913 A 20030703
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 200182215 A1 E 85 G06K-009/00
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
   CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS
   JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL
  PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
  Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
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AU 200155446 A
                                     Based on patent WO 200182215
                       H04L-009/00
                                     Cont of application US 2000553084
US 20030079130 A1
                      G06K-009/100
US 6590996
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                                    CIP of application US 2000503881
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US 20040125983 A1
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                                     Cont of application US 2000553084
                                     Cont of patent US 6590996
                                     CIP of patent US 6614914
Abstract (Basic): WO 200182215 A1
```

NOVELTY - The method involves computing a change in an attribute of an image sample to encode auxiliary information in the image. Color values of the image sample are then processed to effect the change in the image sample attribute with minimized impact on visibility. The changing the color values includes transforming the change in the image sample attribute to a change in color components of the image sample. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:

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(a) a computer readable medium
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(b) a method for assessing whether a watermark in an image is valid

USE - In color image processing in e.g. color masking technology, color adaptive encoding etc.

ADVANTAGE - Enables the user to specify the color or color regions to embed a watermark signal more or less strongly than other colors. The transition into selected color regions is made less visible, by smoothly changing the signal strength depending on the distance from the selected color region. Also, it enables the user to select the color region by selecting pixels having the desired color in the image to be watermarked.

DESCRIPTION OF DRAWING(S) - The drawing is a block diagram illustrating a watermark system according to the present invention. pp; 85 DwgNo 1/25

Title Terms: METHOD; ENCODE; AUXILIARY; INFORMATION; IMAGE; COMPUTATION; CHANGE; ATTRIBUTE; IMAGE; SAMPLE; ENCODE; AUXILIARY; INFORMATION; IMAGE; CHANGE; COLOUR; VALUE; IMAGE; SAMPLE; EFFECT; CHANGE; IMAGE; SAMPLE; ATTRIBUTE

Derwent Class: T01

International Patent Class (Main): G06K-009/00; G06K-009/100; H04L-009/00

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File Segment: EPI
           (Item 21 from file: 350)
3/5/41
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
014241459
            **Image available**
WPI Acc No: 2002-062159/200208
Related WPI Acc No: 1996-518986; 1997-310156; 1998-009129; 1998-110064;
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 2002-154357; 2002-163652; 2002-188040; 2002-205513; 2002-224088;
 2002-226224; 2002-235400; 2002-236852; 2002-238406; 2002-238913;
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 2002-361599; 2002-361694; 2002-382444; 2002-391512; 2002-393501;
 2002-394013; 2002-405083; 2002-413035; 2002-416925; 2002-435593;
 2002-479804; 2002-498079; 2002-498923; 2002-507125; 2002-508021;
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 2003-045908; 2003-057552; 2003-074123; 2003-075114; 2003-091652;
 2003-137905; 2003-140183; 2003-219596; 2003-268467; 2003-327510;
 2003-353776; 2003-362315; 2003-362499; 2003-391983; 2003-401297;
 2003-418353; 2003-418436; 2003-419661; 2003-419904; 2003-465734;
 2003-587433; 2003-615418; 2003-615425; 2003-655616; 2003-655715;
 2003-656012; 2003-658647; 2003-687554; 2003-696414; 2003-767701;
 2003-777048; 2003-800216; 2003-800961; 2003-829683; 2003-897231;
  2004-031964; 2004-041644; 2004-059948; 2004-119479; 2004-155399;
 2004-303569; 2004-386915
XRPX Acc No: N02-046135
 Method of commerce over Internet between user and merchant computers by
 passing authentication ticket from user to merchant to facilitate
 transaction and providing authentication ticket from merchant to
 financial institution
Patent Assignee: DIGIMARC CORP (DIGI-N); LEVY K L (LEVY-I); MILLER M D
  (MILL-I); SHARMA R K (SHAR-I)
Inventor: LEVY K L; MILLER M D; SHARMA R K; ANGLIN H W; LOFGREN N;
 MACINTOSH B T; SEDER P A
Number of Countries: 095 Number of Patents: 003
Patent Family:
                    . .
Patent No
            Kind Date
                            Applicat No Kind Date
                                                          Week
WO 200184438 A1 20011108 WO 2001US14014 A 20010430 200208 B
AU 200159313 A 20011112 AU 200159313 A 20010430 200222
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US 20040128512 A1 20040701 WO 2001US14014 A 20010430 200443

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Priority Applications (No Type Date): US 2001790322 A 20010221; US
 2000562049 A 20000501; US 2003275197 A 20030304
Patent Details:
Patent No Kind Lan Pg
                       Main IPC
                                    Filing Notes
WO 200184438 A1 E 57 G06F-017/60
  Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
  CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS
  JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL
  PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
  Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
  IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
AU 200159313 A
                      G06F-017/60
                                    Based on patent WO 200184438
US 20040128512 A1
                       H04L-009/00
Abstract (Basic): WO 200184438 A1
       NOVELTY - A financial institution (FI) (48) identifier is
   associated with the document and passes an identifier and a session
   ticket to a user computer (42). The FI contacts via the FI identifier
   and passes to the FI the session ticket to obtain an authentication
   ticket. The latter is passes from the user to a merchant computer (44)
    to facilitate a transaction. The authentication ticket is provided from
    the merchant computer to the FI.
       DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:
        (a) a method of verifying data
        (b) a system for exchanging data
        (c) a method of gaining permission
        (d) a method of preventing on line attacks
        (e) a computer readable medium
        (f) a method for facilitating voting
        (g) a method of providing trial access for on-line website
        (h) a method to access a secure location
       (i) a watermark combination lock
       (j) a method of securely transmitting image data over the Internet
       USE - In hidden data systems, using in documents employing digital
   watermarks for facilitating e-commerce transactions.
       ADVANTAGE - Assures that an on-line purchaser of goods has physical
   custody of the credit card being charged. Without such custody, the
   credit card issuer will refuse the requested transaction.
       DESCRIPTION OF DRAWING(S) - The drawing illustrates a system
   according to an illustrative embodiment of the present invention.
       user computer (42)
       merchant computer (44)
       financial institution (FI) (48)
       pp; 57 DwgNo 2/15
Title Terms: METHOD; USER; MERCHANT; COMPUTER; PASS; AUTHENTICITY; TICKET;
 USER; MERCHANT; FACILITATE; TRANSACTION; AUTHENTICITY; TICKET; MERCHANT;
 FINANCIAL; INSTITUTION
Derwent Class: T01; T05
International Patent Class (Main): G06F-017/60; H04L-009/00
File Segment: EPI
           (Item 22 from file: 350)
3/5/42
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
            **Image available**
014190480
WPI Acc No: 2002-011177/200201
Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
 2000-194736; 2000-195398; 2000-365779; 2000-464989; 2000-490584;
  2000-647035; 2001-022904; 2001-335855; 2001-357503; 2001-374044;
 2001-397673; 2001-425330; 2001-570080; 2001-580828; 2001-581298;
  2001-581665; 2001-595705; 2001-607222; 2002-041658; 2002-062159;
  2002-082807; 2002-154357; 2002-163681; 2002-179003; 2002-188040;
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2002-205513; 2002-224088; 2002-226224; 2002-235400; 2002-236852;
  2002-238913; 2002-239839; 2002-254659; 2002-256143; 2002-268672;
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  2002-479804; 2002-498079; 2002-498923; 2002-507125; 2002-508021;
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  2003-800961; 2003-802603; 2003-829683; 2003-897231; 2004-031964;
  2004-041644; 2004-059015; 2004-059948; 2004-070353; 2004-098221;
  2004-119479; 2004-155399; 2004-179244; 2004-179245; 2004-303569;
  2004-386915
XRPX Acc No: N02-009265
  Authentication of physical and electronic media objects using digital
  watermarks for encoding auxiliary data into a host signal so that the
  watermark is imperceptible
Patent Assignee: DIGIMARC CORP (DIGI-N); ALATTAR A (ALAT-I); CARR J S
  (CARR-I); LOFGREN N (LOFG-I); RHOADS G B (RHOA-I); SEDER P A (SEDE-I)
Inventor: ALATTAR A ; CARR J S; LOFGREN N; RHOADS G B ; SEDER P A;
  ALATTAR A M
Number of Countries: 094 Number of Patents: 004
Patent Family:
Patent No
              Kind
                     Date
                             Applicat No
                                            Kind
                                                   Date
                                                            Week
WO 200180169
             A1 20011025
                             WO 2001US12561 A
                                                 20010417
                                                           200201 B
US 20020009208 A1 20020124 US 95512993
                                             Α
                                                 19950809 200210
                             US 96637531
                                             Α
                                                 19960425
                             US 96649419
                                                 19960516
                             US 98186962
                                                 19981105
                                             Α
                             US 2000503881
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                             US 2001837564
                                             A 20010417
AU 200155445
                   20011030
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US 20030138128 A1 20030724
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                             US 96763847
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                             US 98198022
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                                                 20011109
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                             US 2002326575
                                            Α
                                                 20021220
Priority Applications (No Type Date): US 2000198849 P 20000421; US
  2000198138 P 20000417; US 95512993 A 19950809; US 96637531 A 19960425; US
  96649419 A 19960516; US 98186962 A 19981105; US 2000503881 A 20000214; US
  2001837564 A 20010417; US 96763847 A 19961204; US 98109259 P 19981119; US
  98198022 A 19981123; US 99442780 A 19991118; US 200111129 A 20011109; US
  2002326575 A 20021220
Patent Details:
Patent No Kind Lan Pg
                         Main IPC
                                   Filing Notes
WO 200180169 A1 E 90 G06K-009/00
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
   CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP
   KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT
   RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
   Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
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IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
US 20020009208 A1 G06K-009/00
                                      CIP of application US 95512993
                                     CIP of application US 96637531
                                     Cont of application US 96649419
                                     CIP of application US 98186962
                                     CIP of application US 2000503881
                                     Provisional application US 2000198138
                                     Provisional application US 2000198849
                                     CIP of patent US 5822436
                                     Cont of patent US 5862260
AU 200155445 A
                                     Based on patent WO 200180169
US 20030138128 A1
                       G06K-009/00
                                     Cont of application US 95512993
                                   Cont of application US 96763847 · ·
                       Provisional application US 98109259
                                     CIP of application US 98198022
                                     Cont of application US 99442780
                                     Provisional application US 2000198138
                                     Provisional application US 2000198849
                                     CIP of application US 2001837564
                                     CIP of application US 200111129
                                     Cont of patent US 5841886
                                     Cont of patent US 6389151
                                     CIP of patent US 6546112
Abstract (Basic): WO 200180169 A1
       NOVELTY - A digital signal (100), a message (102) and control
    parameters (104) are input and a watermark embedding processor (106)
    converts the message into a watermark information signal, which is then
    combined with the input signal and possibly with an orientation pattern
    to create a watermarked signal (108). This signal is transmitted to a
    watermark detector (110), also receiving control parameters (114) and
    performing correlation or other operations on the captured image in
    order to determine the presence of a watermark and its orientation,
    used by a reader (116) to extract the message.
       DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for a method
    of encoding auxiliary data into a host signal, for a method of
    authenticating a media object, for a computer readable medium with
    software, for an object bearing a media signal, for an identification
    document and for a decoder.
       USE - Authenticating physical and electronic media objects using
    watermarks.
       DESCRIPTION OF DRAWING(S) - The drawing is a block diagram of the
    system
       Message (102)
       Watermarked signal (108)
       Processor (106)
       Watermark detector (110)
       Control parameters (114)
       Reader (116)
       pp; 90 DwgNo 1/21
Title Terms: AUTHENTICITY; PHYSICAL; ELECTRONIC; MEDIUM; OBJECT; DIGITAL;
 WATERMARK; ENCODE; AUXILIARY; DATA; HOST; SIGNAL; SO; WATERMARK
Derwent Class: T01; T04
International Patent Class (Main): G06K-009/00
International Patent Class (Additional): G06K-009/36; G06K-009/40;
  H04L-009/00
File Segment: EPI
 3/5/43
            (Item 23 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
            **Image available**
014123010
WPI Acc No: 2001-607222/200169
Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
  1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122;
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2000-194736; 2000-195398; 2000-365779; 2000-464989; 2000-490584;
  2000-647035; 2001-022904; 2001-335855; 2001-357503; 2001-374044;
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  2001-581665; 2001-595705; 2002-011177; 2002-041658; 2002-062159;
  2002-082807; 2002-154357; 2002-163681; 2002-179003; 2002-188040;
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 2002-315095; 2002-361599; 2002-361694; 2002-370756; 2002-382444;
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  2003-391983; 2003-392393; 2003-401297; 2003-418353; 2003-418436;
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  2003-597620; 2003-615418; 2003-615425; 2003-655604; 2003-655616;
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  2003-707329; 2003-730410; 2003-767701; 2003-777048; 2003-800216;
  2003-800961; 2003-802603; 2003-829683; 2003-897231; 2004-031964;
  2004-041644; 2004-059015; 2004-059948; 2004-070353; 2004-098221;
  2004-119479; 2004-155399; 2004-179244; 2004-179245; 2004-303569;
  2004-386915
XRPX Acc No: N01-453279
 File browser system decodes an object identifier from selected object
  file and displays metadata or action associated with media object file
Patent Assignee: DIGIMARC CORP (DIGI-N); JONES K C (JONE-I)
Inventor: JONES K C; RAMOS D O; RHOADS G B
Number of Countries: 095 Number of Patents: 006
Patent Family:
Patent No
             Kind
                    Date
                            Applicat No
                                           Kind
                                                  Date
                                                           Week
WO 200161508
             A1 20010823
                            WO 2001US4812
                                                20010214
                                            Α
                                                          200169
AU 200137017
             Α
                  20010827
                            AU 200137017
                                            Α
                                                20010214
                                                          200176
US 20010046069 A1 20011129 US 2000183681
                                            P
                                                 20000219 200202
                            US 2001784391
                                            Α
                                                20010215
EP 1257921
              A1 20021120
                            EP 2001909242
                                                20010214
                                                          200301
                                            Α
                            WO 2001US4812
                                           Α
                                                20010214
KR 2003007432 A
                  20030123
                            KR 2002710746 A
                                                20020817
                                                          200336
                            JP 2001560828
JP 2003523697 W
                  20030805
                                                20010214
                                                          200360
                                            Α
                            WO 2001US4812
                                                20010214
                                            Α
Priority Applications (No Type Date): US 2000636102 A 20000810; US
  2000183681 P 20000219; US 2000191778 P 20000324; US 2001784391 A 20010215
Patent Details:
Patent No Kind Lan Pg
                       Main IPC
                                    Filing Notes
WO 200161508 A1 E 68 G06F-013/00
  Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
  CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP
  KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT
  RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW.
  Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
  IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
AU 200137017 A
                                    Based on patent WO 200161508
                                     Provisional application US 2000183681
US 20010046069 A1
                       H04N-001/00
EP 1257921
             A1 E
                      G06F-013/00
                                    Based on patent WO 200161508
  Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
  LI LT LU LV MC MK NL PT RO SE SI TR
KR 2003007432 A
                      G06F-013/00
JP 2003523697 W
                   81 H04N-001/387 Based on patent WO 200161508
Abstract (Basic): WO 200161508 A1
       NOVELTY - A file browser displays media object files stored in
   memory, in a user interface. A file browser extension decodes an object
```

identifier from selected object file and displays metadata or action

associated with media object file through object identifier, in an extension of user interface.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) Watermark decoder system;
- (b) Internet browser;
- (c) User interface extension method;
- (d) Media object rendering method;
- (e) Electronic messaging system;
- (f) Electronic messages distribution control system;
- (g) Electronic messages distribution control method;
- (h) Electronic messages transmitting method;
- (i) Content filtering system;
- (j) Distributed watermark spider system;
- (k) File browsing method

USE - File browser system e.g. internet browser (claimed) especially with digital water markencoding-decoding applications, for media objects including audio signals and video signals, documents, software, multidimesional graphic models, surface textures of objects.

ADVANTAGE - Since the user is given an opportunity to control various stages of watermark detection, an enhanced file browser system is obtained.

DESCRIPTION OF DRAWING(S) - The figure shows the e.g. of user interface features enabled by integrating watermark decoder on internet browser.

pp; 68 DwgNo 3/13
Title Terms: FILE; SYSTEM; DECODE; OBJECT; IDENTIFY; SELECT; OBJECT; FILE;
DISPLAY; ACTION; ASSOCIATE; MEDIUM; OBJECT; FILE
Derwent Class: P85; T01; T04; W01
International Patent Class (Main): G06F-013/00; H04N-001/00; H04N-001/387
International Patent Class (Additional): G06F-015/16; G06T-001/00;
G09C-005/00; H04L-009/00; H04N-007/08; H04N-007/081

## 3/5/44 (Item 24 from file: 350) DIALOG(R) File 350: Derwent WPIX

File Segment: EPI; EngPI

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013889831
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WPI Acc No: 2001-374044/200139
Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
  1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122;
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2004-059948; 2004-070353; 2004-098221; 2004-119479; 2004-155399;

2004-179244; 2004-179245; 2004-303569; 2004-386915 XRPX Acc No: N01-273666

Digital watermarking method for audio and video data broadcasting, involves encoding digital source data to obtain steganographic auxiliary bit data and crediting payments in response to received auxiliary data Patent Assignee: DIGIMARC CORP (DIGI-N); RHOADS G B (RHOA-I); STAGER R R (STAG-I); CARR J S (CARR-I); DAVIS B L (DAVI-I); BRADLEY B A (BRAD-I); CONWELL W Y (CONW-I); LEVY K L (LEVY-I); GUSTAFSON A E (GUST-I); EVANS D B (EVAN-I) Inventor: CARR J S; DAVIS B L; RHOADS G B; STAGER R R; BRADLEY B A; CONWELL W Y; LEVY K L; GUSTAFSON A E; EVANS D B Number of Countries: 089 Number of Patents: 023 Patent Family: Patent No Week Kind Date Applicat No Kind Date WO 200070523 A120001123 WO 2000US13798 A 20000518 200139 B 20001205 AU 200051457 AU 200051457 20000518 200139 Α Α US 99134782 US 20010034705 A1 20011025 P 19990519 200170 US 99337590 Α 19990621 US 2000690773 Α 20001017 US 2001800094 Α 20010305 US 6311214 В1 20011030 US 95508083 Α 19950727 200172 US 98130624 Α 19980806 US 99292569 Α 19990415 Ρ US 99134782 19990519 US 99314648 Α 19990519 US 99342689 А 19990629 US 20010044744 **A**1 20011122 US 99134782 Р 19990519 200176 US 99337590 19990621 Α US 2001804692 Α 20010312 US 20010053234 A1 20011220 US 99134782 P 19990519 200206 US 99337590 -A . 19990621 US 2001804679 20010312 20020131 US 99134782 US 20020012443 A1 Р 200210 19990519 US 2000574668 Α 20000518 US 2000733425 Α 20001208 US 20020016816 A1 20020207 US 95508083 Α 19950727 200213 US 98130624 19980806 Α US 99134782 Ρ 19990519 US 99314648 Α 19990519 US 99342689 Α 19990629 US 2001895748 Α 20010629 US 20020028000 A1 20020307 Ρ US 99134782 19990519 200221 US 99141468 Ρ 19990629 US 99151586 Ρ 19990830 US 99158015 Ρ 19991006 US 99163332 Ρ 19991103 US 99164619 19991110 Ρ US 99476686 19991230 Α US 2000571422 20000515 Α US 2000574726 Α 20000518 US 2001858189. A . .20010514 US 2001888339 Α 20010621 20020314 US 99134782 US 20020032864 A1 200222 19990519 US 99141468 Ρ 19990629 US 99151586 Р 19990830 US 99158015 Ρ 19991006 US 99163322 19991103 Ρ US 99164619 Р 19991110 US 99476686 Α 19991230 US 2000571422 20000515 Α US 2000574726 20000518 Α US 2001858189 Α 20010514 EP 1208499 EP 2000936096 20000518 200243 20020529 Α A 1 WO 2000US13798 A 20000518 B2 20020827 US 99134782 P 19990519 200259 US 6442285 US 2000574668 Α 20000518

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 A 19950727; US 98130624 A 19980806; US 99292569 A 19990415; US 99314648 A
  19990519; US 99342689 A 19990629; US 2001804692 A 20010312; US 2001804679
 A 20010312; US 2000574668 A 20000518; US 2000733425 A 20001208; US
  2001895748 A 20010629; US 99141468 P 19990629; US 99151586 P 19990830; US
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  2002113818 A 20020328; US 2002113910 A 20020328; US 96637531 A 19960425;
 WO 96US6618 A 19960507; US 96649419 A 19960516; US 98169088 A 19981008;
 US 99343104 A 19990629; US 99473396 A 19991228; US 2000178028 P 20000126;
 US 2000491534 A 20000126; US 2000504239 A 20000215; US 2000563664 A
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Patent Details:
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                                    Provisional application US 99134782
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                                     Provisional application US 99134782
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US 20020016816 A1 G06F-015/16 Cont of application US 95508083

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US 20010053234 A1

US 20020012443 A1

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EP	1208499 A1 E Designated States LI LT LU LV MC MK		Based on patent WO 200070523
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		CIP of patent US 5862260
		Cont of patent US 6111954
		CIP of patent US 6438231
JP 2002544627 W	81 G06F-017/60	Based on patent WO 200070523
US 6522769 B1	G06K-009/00	Provisional application US 99134782
US 20030174861 A1	G06K-009/00	CIP of application US 95508083
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Abstract (Basic): WO 200070523 A1

NOVELTY - The digital source data is encoded to indicate plural bit auxiliary data steganographically. The encoded data is input to intervening computer. The payment is credited in response to forwarded data. The plural bit auxiliary data is tested by testing source program in reference to encoding attributes.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

<sup>(</sup>a) objective media recognition system;

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(b) objective media recognizing method;
        (c) reprogrammable watermark detector;
        (d) audio data linking method;
        (e) electronic money transaction method;
        (f) video date distribution method in Internet;
        (g) upgrade trigger encoding method;
        (h) watermark detector reconfiguring method
        USE - For watermarking audio and video data in radio/TV
   broadcasting.
       ADVANTAGE - The owner of objective data is determined easily with
    reference to the decoded plural audio-bit data, thereby payment credit
   is done quickly. The command signal is used to trigger the change in
   operation of watermark detector, thereby signal is interpreted during
   decoding of watermark easy.
        DESCRIPTION OF DRAWING(S) - The figure shows the connection diagram
   of participants and channels involved in distribution of music data.
        pp; 57 DwgNo 1/2
Title Terms: DIGITAL; WATERMARK; METHOD; AUDIO; VIDEO; DATA; BROADCAST;
  ENCODE; DIGITAL; SOURCE; DATA; OBTAIN; AUXILIARY; BIT; DATA; RESPOND;
  RECEIVE; AUXILIARY; DATA
Derwent Class: P27; P85; P86; Q47; S06; T01; T04; T05; W02; W04
International Patent Class (Main): G06F-013/00; G06F-015/16; G06F-017/00;
  G06F-017/60; G06K-009/00; G10L-021/00; H04K-001/00; H04L-009/00
International Patent Class (Additional): G06F-009/00; G06T-001/00;
  G09C-005/00; G10L-011/00; H04L-009/32; H04N-001/387; H04N-007/08;
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  2002-642228; 2002-654787; 2002-672857; 2002-673567; 2002-681419;
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XRPX Acc No: N01-259813
  Operating a computer system e.g. for linking to internet resources from
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operating a computer system e.g. for linking to internet resources from physical and electronic objects, using new user interfaces, such as identifiers that serve to trigger object-appropriate responses from

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computer
Patent Assignee: DIGIMARC CORP (DIGI-N); RHOADS G B (RHOA-I); BRADLEY B A
  (BRAD-I); CONWELL W Y (CONW-I); LEVY K L (LEVY-I); CASTLE J B (CAST-I);
  HEIN W (HEIN-I); ONEY C (ONEY-I); SEDER P (SEDE-I); DAVIS B L (DAVI-I);
  EVANS D B (EVAN-I); DECKER S K (DECK-I); HANNIGAN B T (HANN-I); KLONSKY A
  (KLON-I); RODRIGUEZ T F (RODR-I); SEDER P A (SEDE-I); SHARMA R K (SHAR-I)
  ; CARR J S (CARR-I)
Inventor: CARR J S; DAVIS B L; GROSSI B J; HEIN W C; MACINTOSH B T;
 MCKINLEY T J; PERRY B W; RHOADS G B ; RODRIQUEZ T F; SEDER P A;
  RODRIGUEZ T F; BRADLEY B A; CONWELL W Y; LEVY K L; CASTLE J B; HEIN W;
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Number of Countries: 097 Number of Patents: 020
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Priority Applications (No Type Date): US 2000552998 A 20000419; US 99314648
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Provisional application US 99151586

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Provisional application US 99158015 Provisional application US 99163332

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		CIP of patent US 5822436
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		Cont of patent US 5862260

Abstract (Basic): EP 1054335 A2

NOVELTY - The method entails providing a frame of image data, decoding plural-bit identifier data from the image data, consulting the registry database to identify a software program corresponding to the identifier data, and invoking the identifier software program. 1.

DETAILED DESCRIPTION - Several fields of the image data are decoded stenographically, with at least one field comprising the identifier data, and another field is provided to the identified software program for its use. AN INDEPENDENT CLAIM is made for: 1. Method of data processing on computer system; 2. A greeting card comprising a substrate with visually-perceptible indicia printed on it; 3. Method of providing a customized greeting card; 4. Method of printing a magazine; 5. Method of determining consumer response to print advertising; 6. Method of interacting with magazine using a computer; 7. Computer peripheral and its use; 8. Electronic commerce method; 9. Image-based network navigation method permitting a user to link to remote computer; and 10. Network computer system, responsive to watermark data sent from a software program on a remote computer.

USE - Application of new user interfaces to computers, which extend into everyday world beyond the mouse and keyboard, enabling objects to communicate their identities and functions to attendant devices.

ADVANTAGE - Facilitates use of application program for data processing on computer system, encode binary data which can be decoded by an image processing device and used to direct a computer to a web site where an image, video, and/or audio presentation corresponds to the card is provided. Enables use of electronic commerce to use pre-stored customer profile information.

DESCRIPTION OF DRAWING(S) - Drawing shows the main process components of an illustrative system employing the present technology. pp; 90 DwgNo 1/19

Title Terms: OPERATE; COMPUTER; SYSTEM; LINK; RESOURCE; PHYSICAL; ELECTRONIC; OBJECT; NEW; USER; INTERFACE; IDENTIFY; SERVE; TRIGGER; OBJECT; APPROPRIATE; RESPOND; COMPUTER

Derwent Class: P27; P74; P85; Q47; T01; T05; W02; W04

International Patent Class (Main): B41F-001/00; G06F-013/00; G06F-015/00; G06F-015/16; G06F-017/00; G06F-017/30; G06F-017/60; G06K-009/00;

G09C-005/00; H04L-009/00; H04M-001/00

International Patent Class (Additional): G06F-012/00; G06K-007/00;

G06K-009/36; G06K-019/06; H04B-001/38; H04K-001/00 File Segment: EPI; EngPI

3/5/46 (Item 26 from file: 350) DIALOG(R) File 350: Derwent WPIX (c) 2004 Thomson Derwent. All rts. reserv. \*\*Image available\*\* 013871059 WPI Acc No: 2001-355271/200137 XRPX Acc No: N01-258166 Security device for preventing large numbers of items of merchandise being removed from a display rack has two inter fitting base members Patent Assignee: ALPHA SECURITY PROD INC (ALPH-N); LEVY K L (LEVY-I); RHOADS G B (RHOA-I); BELDEN D D (BELD-I); CHRISTIAN T H (CHRI-I); HUEHNER D (HUEH-I); JAEB M (JAEB-I); MICHAEL R L (MICH-I); SEDON N M (SEDO-I) Inventor: BELDEN D D; CHRISTIAN T H; HUEHNER D; JAEB M; MICHAEL R L; SEDON N M; LEVY K L; RHOADS G B; MICHAEL R J Number of Countries: 095 Number of Patents: 011 Patent Family: Patent No Kind Date Applicat No Kind Week Date 20010510 WO 2000US41893 A 20001103 WO 200132061 A2 200137 B 20010514 AU 200132681 AU 200132681 Α Α 20001103 200149 US 20020032864 A1 20020314 US 99134782 Ρ 19990519 200222 US 99141468 Ρ 19990629 US 99151586 Ρ 19990830 US 99158015 Ρ 19991006 US 99163322 Р 19991103 US 99164619 Ρ 19991110 US 99476686 Α 19991230 US 2000571422 Α 20000515 US 2000574726 Α 20000518 US 2001858189 Α 20010514 BR 200015311 20020625 BR 200015311 Α Α 20001103 200251 WO 2000US41893 A 20001103 EP 1227744 A2 20020807 EP 2000991457 Α 20001103 200259 WO 2000US41893 A 20001103 US 6474478 20021105 US 99163322 Р 19991103 B1 200276 US 2000705435 Α 20001103 US 20030029816 A1 20030213 Ρ 19991103 200314 US 99163322 US 2000705435 Α 20001103 US 2002272726 Α 20021017 20031209 US 6659291 B2 US 99163322 Ρ 19991103 200381 US 2000705435 Α 20001103 US 2002272726 Α 20021017 EP 1227744 В1 20040128 EP 2000991457 20001103 Α 200410 20001103 WO 2000US41893 A DE 6020008014 Ε 20040304 DE 2000608014 Α 20001103 200419 EP 2000991457 Α 20001103 WO 2000US41893 A 20001103 US 20040084386 A1 20040506 US 99163322 Ρ 19991103 200430 US 2000705435 20001103 Α US 2002272726 Α 20021017 US 2003692099 Α 20031023 Priority Applications (No Type Date): US 99163322 P 19991103; US 99134782 P 19990519; US 99141468 P 19990629; US 99151586 P 19990830; US 99158015 P 19991006; US 99164619 P 19991110; US 99476686 A 19991230; US 2000571422 A 20000515; US 2000574726 A 20000518; US 2001858189 A 20010514; US 2000705435 A 20001103 Patent Details: Filing Notes Patent No Kind Lan Pg Main IPC WO 200132061 A2 E 29 A47F-005/08 Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT

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Abstract (Basic): WO 200132061 A2
       NOVELTY - A security device comprises a first rod (62) to carry
   merchandise extends outwardly from the display board. The first rod has
    an outer end over which the items (14) of merchandise are removed from
    the device and an end assembly adjacent to the outer end of the first
    rod.
       DETAILED DESCRIPTION - The assembly includes an inner base member
    (224) connected to the display board and an outer base member (266)
    that may be selectively locked to the inner base member where the outer
    base member prevents the inner base member being removed from the
    display board
       USE - Prevents large numbers of items being removed from a display
    rack.
       ADVANTAGE - The invention slows a shoplifter by forcing them to
    remove the items of merchandise one by one. A security device may be
    locked to the display board so that the shoplifter cannot remove the
    entire device with the merchandise.
        DESCRIPTION OF DRAWING(S) - The drawing shows a perspective view of
    the safety device.
        Items (14)
        First rod (64)
       Inner base member (224)
       Outer base member (226)
        pp; 29 DwgNo 15/32
Title Terms: SECURE; DEVICE; PREVENT; NUMBER; ITEM; MERCHANDISE; REMOVE;
  DISPLAY; RACK; TWO; INTER; FIT; BASE; MEMBER
Derwent Class: P27; Q47; T01; T05; W02; W04
International Patent Class (Main): A47F-005/00; A47F-005/08; B42F-001/00;
  E05B-073/00; H04L-009/00
International Patent Class (Additional): G06F-017/60
File Segment: EPI; EngPI
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Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR

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(c) 2004 Thomson Derwent. All rts. reserv.
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  2004-119479; 2004-155399; 2004-179244; 2004-179245; 2004-303569;
  2004-386915
XRPX Acc No: N01-017786
  Photographic paper produces image based on coextensive auxiliary
  information signal that is encoded as patterned physical characteristics
Patent Assignee: DIGIMARC CORP (DIGI-N)
Inventor: RHOADS G B
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No
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                     Date
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                             US 94327426
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                                                 19981008
Priority Applications (No Type Date): US 96637531 A 19960425; US 94215289 A
  19940317; US 94327426 A 19941021; US 95438159 A 19950508; US 95534005 A
  19950925; US 98169088 A 19981008
Patent Details:
Patent No Kind Lan Pq
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US 6111954
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                  69 H04L-009/00
                                     CIP of application US 94215289
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                                     CIP of application US 95534005
                                     Cont of application US 96637531
                                     CIP of patent US 5768426
                                     Cont of patent US 5822436
                                     CIP of patent US 5832119
                                     CIP of patent US 5850481
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NOVELTY - An auxiliary information signal is encoded as a patterned

Abstract (Basic): US 6111954 A

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physical characteristics which is coextensive with the paper, so as to
    produce an image.
        DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for
    photographic paper processing method.
        USE - For copying photographs with copyright protection function.
       ADVANTAGE - Facilitates the consumer's compliance with copyright
    law, serves the photographer whose owns copyright and aids the copy
    service and supply vendor.
        DESCRIPTION OF DRAWING(S) - The figure shows registration process
    for subliminal graticule using inclined axes.
       pp; 69 DwgNo 35C/37
Title Terms: PHOTOGRAPH; PAPER; PRODUCE; IMAGE; BASED; AUXILIARY;
  INFORMATION; SIGNAL; ENCODE; PATTERN; PHYSICAL; CHARACTERISTIC
Derwent Class: S06; W02; W04
International Patent Class (Main): H04L-009/00
File Segment: EPI
 3/5/48
            (Item 28 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
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WPI Acc No: 2000-490584/200043
Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
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  2004-059948; 2004-070353; 2004-098221; 2004-119479; 2004-155399;
  2004-179244; 2004-179245; 2004-303569; 2004-386915
XRAM Acc No: C00-147307
XRPX Acc No: N00-364099
  Counterfeit deterrence method for recognition of original security
  documents such as passports, visa, stock certificates, involves
  recognizing security document by directing web browser to related web
  site
Patent Assignee: DIGIMARC CORP (DIGI-N)
Inventor: CARR J S; DAVIS B L; RHOADS G B
Number of Countries: 088 Number of Patents: 005
Patent Family:
Patent No
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                             Applicat No
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WO 200036785
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EP 1142190
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WO 99US30217

20020112 KR 2001707645

KR 2002003357 A

19991216

20010618 200247

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Priority Applications (No Type Date): US 98112955 P 19981218 Patent Details: Patent No Kind Lan Pg Main IPC Filing Notes WO 200036785 A1 E 18 H04L-009/00 Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN ...... CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW AU 200023695 A Based on patent WO 200036785 EP 1142190 Based on patent WO 200036785 A1 E Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI G06F-017/00 KR 2002003357 A 20 G06F-017/60 JP 2002532812 W Based on patent WO 200036785 Abstract (Basic): WO 200036785 A1 NOVELTY - The method involves recognizing a security document by directing a web browser to a related web site. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (i) Computer storage medium which stores instructions for causing a computer to perform recognition of security documents. (ii) Digital water marking method, which involves changing the luminosity of the printed image at various areas, to encode digital data steganographically. The watermark signal is improved in the region of the image that has relatively uniform inking, by making small points within such region essentially devoid of ink. One or more points have a dimension of 100 mu or less. USE - For recognition of original security documents such as passports, visa, postal stamps, stock certificates, travelers cheque, concert ticket and lottery ticket. ADVANTAGE - The method provides an effective and rapidly deployable global solution to the growing digital counterfeiting problem. Security document detection using digital watermark is performed readily and reliably during typical operations of a personal computer system. The method prevents the acquisition and printing of security document images, while providing artists with a central resource to obtain approved images for use in marketing, communications and other legitimate uses. pp; 18 DwgNo 0/0 Title Terms: COUNTERFEIT; METHOD; RECOGNISE; ORIGINAL; SECURE; DOCUMENT; PASSPORT; STOCK; CERTIFY; RECOGNISE; SECURE; DOCUMENT; DIRECT; WEB; RELATED; WEB; SITE Derwent Class: A85; G05; P85; W01 International Patent Class (Main): G06F-017/00; G06F-017/60; H04L-009/00 International Patent Class (Additional): C09D-011/00; G06T-001/00; G09C-005/00; H04L-009/32; H04N-001/387; H04N-001/40 File Segment: CPI; EPI; EngPI 3/5/49 (Item 29 from file: 350) DIALOG(R) File 350: Derwent WPIX (c) 2004 Thomson Derwent. All rts. reserv. 013293054 \*\*Image available\*\* WPI Acc No: 2000-464989/200040 Related WPI Acc No: 1996-518986; 1997-310156; 1998-009129; 1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122; 2000-194736; 2000-195398; 2000-365779; 2000-490584; 2000-647035; 2001-022904; 2001-335855; 2001-357503; 2001-374044; 2001-397673; 2001-425330; 2001-570080; 2001-580828; 2001-581298; 2001-581665; 2001-595705; 2001-607222; 2002-011177; 2002-041658; 2002-062159; 2002-082807; 2002-154357; 2002-188040; 2002-205513; 2002-224088; 2002-226224;

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  2004-386915
XRPX Acc No: N00-347074
  Self validating security document e.g. passports, has watermark data in
 multiple areas such that validation is performed by automatic comparison
  of data with user's physical characteristics
Patent Assignee: DIGIMARC CORP (DIGI-N); CARR J S (CARR-I); PERRY B W
  (PERR-I); RHOADS G B (RHOA-I)
Inventor: CARR J S; PERRY B W; RHOADS G B
Number of Countries: 086 Number of Patents: 006
Patent Family:
Patent No
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Priority Applications (No Type Date): US 98109259 P 19981119; US 9874034 A
  19980506; US 99442780 A 19991118; US 2000512993 A 20000224; US 2001763847
  A 20010227; US 200111129 A 20011109; US 95512993 A 19950809; US 96763847
  A 19961204; US 98198022 A 19981123; US 2000198138 P 20000417; US
  2000198849 P 20000421; US 2001837564 A 20010417; US 2002326575 A 20021220
Patent Details:
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WO 200031675 A2 E 19 G06K-000/00
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AU 200016248 A
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EP 1131769
             A2 E
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                                     CIP of application US 2001837564
                                     CIP of application US 200111129
                                     Cont of patent US 5841886
                                     Cont of patent US 6389151
                                     CIP of patent US 6546112
Abstract (Basic): WO 200031675 A2
        NOVELTY - The security documents are provided with watermark data
    (15) on multiple areas. The validation of the documents is performed by
    automatic comparison of data with user's physical characteristics.
        DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
    following:
        (a) document validation system;
        (b) document production method
        USE - E.g. passports, driving licenses, credit cards.
        ADVANTAGE - Validation is done entirely automatically, so that need
    for human intervention is reduced.
        DESCRIPTION OF DRAWING(S) - The figure illustrates security
    document.
        Watermark data (15)
        pp; 19 DwgNo 1/3
Title Terms: SELF; VALID; SECURE; DOCUMENT; PASSPORT; WATERMARK; DATA;
 MULTIPLE; AREA; VALID; PERFORMANCE; AUTOMATIC; COMPARE; DATA; USER;
  PHYSICAL; CHARACTERISTIC
Derwent Class: T01; T04
International Patent Class (Main): G06K-000/00; G06K-001/00; G06K-009/00
International Patent Class (Additional): G06K-009/36; H04L-009/00
File Segment: EPI
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DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
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Provisional application US 98109259

G06K-009/00

US 6389151

В1

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2003-800961; 2003-802603; 2003-829683; 2003-897231; 2004-031964;
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  2004-119479; 2004-155399; 2004-179244; 2004-179245; 2004-303569;
  2004-386915
XRPX Acc No: N00-010182
  Digital watermark based counterfeit prevention method for bank notes,
  security documents, etc.
Patent Assignee: DIGIMARC CORP (DIGI-N); RHOADS G B (RHOA-I); GUSTAFSON A E
  (GUST-I); BRUNDAGE T J (BRUN-I); CARR J S (CARR-I)
Inventor: RHOADS G B ; GUSTAFSON A E; BRUNDAGE T J; CARR J S
Number of Countries: 087 Number of Patents: 034
Patent Family:
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                            US 98127502
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Priority Applications (No Type Date): US 9874034 A 19980506; US 9882228 P
  19980416; US 94327426 A 19941021; US 95438159 A 19950508; US 99293602 A
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  19960516; US 97967693 A 19971112; US 98127502 A 19980731; US 2001761349 A
  20010116; US 2001761280 A 20010116; US 2001898914 A 20010703; US
  2001939298 A 20010824; US 2001975739 A 20011010; US 9871983 P 19980120;
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  2002113818 A 20020328; US 2002113910 A 20020328; US 2002165751 A 20020606
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  19950727; US 95534005 A 19950925; US 96637531 A 19960425; WO 96US6618 A
  19960507; US 96746613 A 19961112; US 98186962 A 19981105; US 98112955 P
  19981218; US 99465418 A 19991216; US 2000482749 A 20000113; US 2000503881
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  97951858 A 19971016; US 2002286357 A 20021031; US 2003359550 A 20030205;
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  US 99442440 A 19991117; US 2001998763 A 20011129; US 2003379393 A
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Patent Details:
Patent No Kind Lan Pg Main IPC
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US 20010022848 A1
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US 99292569

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			Cont of application US 96649419 CIP of application US 97967693 Provisional application US 9882228 CIP of application US 9874034 Div ex application US 98127502 Cont of patent US 5745604 Cont of patent US 5862260 CIP of patent US 6122392
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US 6567534 B1	H04K-001/00	CIP of application US 95438159 Provisional application US 9882228 Div ex application US 9874034 CIP of patent US 5850481 Div ex patent US 6449377
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US 20030128861 A1	G06K-009/00	CIP of application US 93154866 CIP of application US 94215289 Cont of application US 94215289 CIP of application US 94327426 CIP of application US 95436102 CIP of application US 95438159
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Abstract (Basic): WO 9953428 A1
                  NOVELTY - The face of a bank note is marked with a machine
         readable, imperceptible digital data containing several bits. The
         predetermined digital data for a bank note is encoded on the face of
         the bank note by slightly altering the distribution of an ink on the
         face of the bank note. Several bits in a digital data are encoded
         redundantly across the bank note rather than in a localized region.
                   DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
                                                                                A CALL CONTRACTOR OF THE ACCURACY OF THE ACCUR
                   (a) bank note validating apparatus;
                   (b) a cash processing apparatus
                  USE - For bank notes, travelers checks, passports, stock
         certificates, security documents etc.
                  ADVANTAGE - Prevents reproduction of bank notes and security
         documents reliably.
                  DESCRIPTION OF DRAWING(S) - The figure shows change in line width
         across regions in bank note.
                  pp; 41 DwgNo 5/10
Title Terms: DIGITAL; WATERMARK; BASED; COUNTERFEIT; PREVENT; METHOD; BANK;
    NOTE; SECURE; DOCUMENT
Derwent Class: P75; S06; T01; T04; T05; W02; W04
International Patent Class (Main): G06K-009/00; G07D-007/00; H04K-001/00;
    HO4L-009/00 ; HO4N-001/387
International Patent Class (Additional): B41N-001/00; G06K-009/36;
    G06T-001/00; G07D-007/12; H04N-001/40; H04N-007/167
File Segment: EPI; EngPI
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DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
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Cont of application US 99476686

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  2004-386915
XRPX Acc No: N99-331496
  Using watermarks to determine authenticity and history of particular
  document or image in steganography, with watermarks having different
  characteristics so they are affected in different manner
Patent Assignee: DIGIMARC CORP (DIGI-N); GUSTAFSON A E (GUST-I); RHOADS G B
  (RHOA-I)
Inventor: GUSTAFSON A; RHOADS G; GUSTAFSON A E; RHOADS G B
Number of Countries: 027 Number of Patents: 015
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Priority Applications (No Type Date): US 9871983 P 19980120; US 99234780 A
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  19990407; US 99134782 P 19990519; US 2000498223 A 20000203; US 2000574726
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Patent Details:
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   Designated States (National): AU BR CA IL JP KR MX
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   Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI
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US 20020159615 A1
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Inter	cnational	Patent C.; H04N-0	lass (Addition 01/46; H04N-00	al): G06K-015/00; G06T-001/00; 1/60

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(c) 2004 Thomson Derwent. All rts. reserv.
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WPI Acc No: 1998-568097/199848
Related WPI Acc No: 1995-200530; 1996-518986; 1997-310156; 1998-009129;
 1998-110064; 1998-286225; 2000-194736; 2001-022904
XRPX Acc No: N98-441985
 Photographic emulsion paper - exposes and develops image which comprises
 image signal encoded as patterned physical characteristic co-extensive
 with paper
Patent Assignee: DIGIMARC CORP (DIGI-N)
Inventor: RHOADS G B
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No
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Priority Applications (No Type Date): US 96637531 A 19960425
Patent Details:
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US 5822436
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                   70 H04L-009/00
Abstract (Basic): US 5822436 A
       The photographic emulsion paper exposes and develops an image which
   comprises an encoded auxiliary information signal. The signal is
   encoded as a patterned physical characteristic co- extensive with
       USE - For wedding and portrait photographers:
       ADVANTAGE - Permits consumers to make amateur or even professional
   grade copies of photographs.
       Dwg.1/37
Title Terms: PHOTOGRAPH; EMULSION; PAPER; EXPOSE; DEVELOP; IMAGE; COMPRISE;
  IMAGE; SIGNAL; ENCODE; PATTERN; PHYSICAL; CHARACTERISTIC; CO; EXTEND;
  PAPER
Index Terms/Additional Words: STEGANOGRAPHY
Derwent Class: W01
International Patent Class (Main): H04L-009/00
File Segment: EPI
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DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
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XRPX Acc No: N98-007164 - .
                                                                     and and the state of the state 
   Multi-computer system with network for embedding and reading watermark -
   facilitates scale and rotation registration for steganographic decoding
   using rotationally symmetric steganographically embedded patterns and
   subliminal digital graticules, for enhanced security in financial
   transactions
Patent Assignee: DIGIMARC CORP (DIGI-N); RHOADS G B (RHOA-I)
Inventor: RHOADS G B
Number of Countries: 022 Number of Patents: 017
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Priority Applications (No Type Date): US 96746613 A 19961112; US 96649419 A

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Patent Details:
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Abstract (Basic): WO 9743736 A

The multicomputer system includes a first digital computer connected to an input device, an output device and a memory storing several creator identifiers and creator contact data corresponding to the identifiers. A second digital computer is connected to second input and output devices and is programmed to embed a watermark in a digital photographic image.

The watermark includes several creator identifiers. A third computer with input and output devices reads the watermark in the image to reveal one of the creator identifiers. A network communicates the revealed identifier to the first computer to obtain the contact data corresponding to one of the several identifiers from the memory.

USE - For providing improvements to steganographic systems and their applications.

ADVANTAGE - Provides improved techniques for decoding without access to unencoded originals and improves robustness of steganographic coding in motion pictures and or in presence of lossy compression and decompression.

Dwg.0/65

Title Terms: SYSTEM; NETWORK; EMBED; READ; WATERMARK; FACILITATE; SCALE; ROTATING; REGISTER; DECODE; ROTATING; SYMMETRICAL; EMBED; PATTERN; SUBLIMINAL; DIGITAL; GRATICULE; ENHANCE; SECURE; FINANCIAL; TRANSACTION Derwent Class: T01

International Patent Class (Main): G06K-009/00; G06K-009/36; H04K-001/00;

H04L-009/00

International Patent Class (Additional): G06K-009/46

File Segment: EPI

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Patent Assignee: DIGIMARC CORP (DIGI-N); RHOADS G B (RHOA-I); CARR J S
  (CARR-I)
Inventor: RHOADS G B ; CARR J S; RHOADS G
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				US 95436134	A	19950508		
				US 95438159	A	19950508		
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01	2002304272	<b>"</b> .	20020200	WO 96US6618	A	19960507	\$00515	And the British of the Control of th
US	20020034297	A1	20020321		A	19960425	200224	
				US 98172324	A	19981013		
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US	20020078146	A1	20020620	US 95508083	A.	19950727	200244	
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US 99339314 A 19990623
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  19950925; US 93154866 A 19931118; US 94215289 A 19940317; US 94327426 A
  19941021; US 95436098 A 19950508; US 95436099 A 19950508; US 95436134 A
  19950508; US 95438159 A 19950508; US 96763847 A 19961204; WO 94US13366 A
  19941116; US 96649419 A 19960507; US 96746613 A 19961112; US 98130624 A
  19980806; US 99464307 A 19991215; US 96635531 A 19960425; US 98172324 A
  19981013; US 99339314 A 19990623; US 2001924281 A 20010807; US 99431990 A
  19991103; US 2001882279 A 20010614; US 98186962 A 19981105; US 99441820 A
  19991117; US 2001941243 A 20010828; US 99408902 A 19990929; US 9871983 P
  19980120; US 9874034 A 19980506; US 99234780 A 19990120; US 99293601 A
  19990415; US 98169088 A 19981008; US 2000640806 A 20000817; US 98198022 A
  19981123; US 2002164899 A 20020604; US 2000503881 A 20000214; US
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  ; US 99413117 A 19991006; US 2002109437 A 20020326; US 2003377170 A
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20030226; US 2003374672 A 20030225; US 2003656076 A 20030904

Cited Patents: 2.Jnl.Ref; EP 551016; EP 581317; EP 605208; EP 649074; US

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can be applied to signals of one, twestion the identification signal that

Abstract (Basic): WO 9636163 A

В2

H04L-009/00

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The steganographic systems can be applied to signals of one, two or more dimensions. In a simple version the identification signal that is to be added to an original signal can be of any length, e.g. 8 to 128 bits. The identification signal is preceded by a defined pattern, e.g. 0101 that is used as an aid in detection. The digital signal is added to the original signal at a low power level. This level is application specific and depends on the acceptable increase in noise levels.

A suspect image can then be normalised and have the original subtracted from it to extract the identification code. More complex methods are also defined.

USE/ADVANTAGE - E.g. for coding financial and secure documents, for counterfeit resistant cards, fraud deterrent systems for cellular telephony, and covert modem channels for video transmission. Also for photo duplication kiosks with automatic copyright detection and hot-linked images (e.g. with embedded (URLs) for use on internet. Defines range of methods to add and identify signatures in electronic signals and images. Allows scale and rotation registration for signal decoding by using embedded patterns and subliminal graticules.

Dwg.29/41

Title Terms: METHOD; ADD; CIPHER; CRYPTOGRAPHIC; IDENTIFY; SIGNAL; ADD; RANDOM; IDENTIFY; SIGNAL; LOW; POWER; LEVEL; ORIGINAL; SIGNAL; ALLOW; SUBSEQUENT; DETECT

Derwent Class: P76; P85; T01; T03; T05; W01; W02; W04

International Patent Class (Main): B42D-015/00; G06F-013/00; G06F-015/16;

G06K-009/00; G06K-009/36; G06T-009/00; H04K-001/00; H04K-001/02;

H04L-001/00; H04L-009/00; H04N-001/32; H04N-001/387

International Patent Class (Additional): G06T-001/00; G09C-001/00;

H04M-001/66; H04N-001/00

File Segment: EPI; EngPI

3/5/55 (Item 35 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.

\*\*Image available\*\* 010299269 WPI Acc No: 1995-200530/199526 Related WPI Acc No: 1996-518986; 1997-310156; 1998-009129; 1998-110064; 1998-286225; 1999-204782; 1999-444465; 2000-013122; 2000-194736; 2000-195398; 2000-365779; 2000-490584; 2001-022904; 2001-335855; 2001-357503; 2001-374044; 2001-397673; 2001-425330; 2001-570080; 2001-580828; 2001-581298; 2001-581665; 2001-595705; 2001-607222; 2002-011177; 2002-041658; 2002-082807; 2002-154357; 2002-163681; 2002-179003; 2002-188040; 2002-205513; 2002-224088; 2002-226224; ... 2002-235400; 2002-236852; 2002-238913; 2002-254659; 2002-256143; 2002-268672; 2002-361599; 2002-370756; 2002-382444; 2002-391512; 2002-392708; 2002-403568; 2002-405083; 2002-413035; 2002-435593; 2002-470507; 2002-498079; 2002-498923; 2002-507125; 2002-508021; 2002-556177; 2002-598923; 2002-636862; 2002-642228; 2002-654787; 2002-672857; 2002-673567; 2002-691185; 2002-697772; 2003-045908;

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XRPX Acc No: N95-157496
  Identification coding of input signal for consecutive identification -
  impresses identification code signal on carrier and uses cross
  correlation technique to compare samples with original and detect carrier
Patent Assignee: DIGIMARC CORP (DIGI-N); RHOADS G B (RHOA-I); PINECONE
  IMAGING CORP (PINE-N)
Inventor:
           RHOADS G B
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US 95512993

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## Abstract (Basic): WO 9514289 A

An identification word is encoded onto an original signal by multiplying corresponding bit values, the resultant being accumulated in the composite signal. The composite signal is attenuated down to the acceptable perceived noise amplitude and the resultant signal added to the original to become the distributable signal. A suspect signal, which may have undergone multiple copies, compressions and decompressions is re-sampled and aligned onto the digital format of the original signal and the signal levels matched.

The original signal is then subtracted from the normalised suspect signal to produce a difference signal which is then cross correlated with the word all the embedded code signals to produce cross correlation values. Suspect signals are then identified by comparison of the peak cross correlation values with the original identification word.

USE/ADVANTAGE - In embedding identification codes in electronic, optical and physical media and later identification of copies. Robust method. Detects copies after various stages of processing and subsequent degradation of medium.

Dwg.6/12

Title Terms: IDENTIFY; CODE; INPUT; SIGNAL; CONSECUTIVE; IDENTIFY; IMPRESS; IDENTIFY; CODE; SIGNAL; CARRY; CROSS; CORRELATE; TECHNIQUE; COMPARE; SAMPLE; ORIGINAL; DETECT; CARRY

Derwent Class: P76; P85; T01; T03; T05; W01; W02; W04

International Patent Class (Main): B42D-015/00; G06F-015/16; G06K-009/00; G06K-009/36; G06K-019/14; G09C-003/00; H04B-001/66; H04K-001/00; H04K-001/02; H04L-001/00; H04L-009/00; H04L-009/32; H04N-001/387; H04N-005/913

International Patent Class (Additional): G06F-017/60; G06T-001/00;
G09C-001/00; G09C-005/00; G11B-020/00; G11B-020/10
File Segment: EPI; EngPI